

Part 135—Operating Requirements: Commuter and On-Demand Operations

This change incorporates four amendments:

Amendment 135-57, Air Carrier and Commercial Operator Training Programs, adopted December 8, 1995, and effective March 19, 1996, revises §§ 135.3, 135.241, 135.291, 135.321 and adds § 135.12. The preamble starts on page P-606.

Amendment 135-58, Commuter Operations and General Certification and Operations Requirements, adopted December 12, 1995, and effective January 19, 1996. This amendment adds § 135.64. The following sections are removed: §§ 135.1(b), 135.5, 135.9, 135.11, 135.13, 135.15, 135.17, 135.27, 135.29, 135.31, 135.33, 135.35, 135.37, and 135.39. The following sections are revised: §§ 135.1(a), 135.2, 135.7, 135.21(b) and (f), 135.23(a), 135.41, 135.43, 135.105(a), 135.165(a), 135.243(a), and 135.244(a). This amendment also changes the heading of part 135. The preamble starts on page P-619.

Amendment 135-59, Revision of Authority Citations, adopted December 20, 1995, and effective December 28, 1995. The preamble starts on page P-734.

Amendment 135-60, Operating Requirements: Domestic, Flag, Supplemental, Commuter, and On-Demand Operations: Editorial and Terminology Changes, adopted January 17, 1996, and effective February 26, 1996. The following sections are revised: §§ 135.91, 135.127, 135.129, 135.151, 135.153, 135.173, 135.179, 135.213, 135.227, 135.273, 135.417, and 135.431. Sections 135.10 and 135.267(g) are removed. The preamble starts on page P-735.

The Commuter Rule also affects three Special Federal Aviation Regulations (SFAR):

SFAR 38-2 which terminates on March 20, 1997.

SFAR 50-2 amends paragraph (c)(2) of § 3 and revises § 6.

SFAR 71 is amended by revising § 1 and the introductory text of § 7.

Bold brackets enclose the most recently added or changed material. The amendment number and effective date of new material appear in bold brackets at the end of each section.

Suggest filing this transmittal at the beginning of the FAR. It will provide a method for determining that all changes have been received as listed in the current edition of AC 00-44, Status of Federal Aviation Regulations, and a check for determining if the FAR contains the proper pages.

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operators of these commuter category airplanes would have to comply with the seat cushion fire-blocking standards. Prior to Amendment 135-55, these operators were not required to comply with the fire-blocking standards. Although the seats of these commuter category airplanes were not previously required to meet the seat cushion fire-blocking standards of part 135, they have been required to meet the applicable flammability standards of part 23 of the FAR.

The desired fire-blocking requirements in part 135 were previously contained in § 135.169(a), which referenced § 121.312, which in turn referenced § 25.853(c) and appendix F to part 25 for the specific requirements. Section 135.169(a), however, specifically excluded commuter category airplanes from having to comply with the requirements of § 121.312. This exclusion was inadvertently dropped from Notice of Proposed Rulemaking (NPRM) 90-12, which ultimately resulted in Amendment 135-55. The lack of intent on the part of the FAA to require part 135 operators of commuter category airplanes to meet these additional seat cushion flammability standards can be seen in the preamble to the NPRM. In that regard, the title of Amendment 135-55 refers specifically to transport category airplane cabins and does not refer to those of commuter category airplanes. Under NPRM's **Regulatory Evaluation**, the FAA stated "the proposed amendment to part 135 is merely a non-substantive editorial change which would cause no additional burden to any person." Requiring operators to provide fire-blocked seat cushions would have been more than a non-substantive editorial change.

In response to the NPRM, several commenters submitted comments related to the omission of the exception for commuter category airplanes. One commenter expressed concern that the proposed § 135.170(b) would apply to all large airplanes and would appear to add substantial requirements to airplanes certificated under Special Federal Aviation Regulation (SFAR) 41. The FAA responded that an airplane type certificated under SFAR 41 would not be required by new § 135.170(b) to comply because it is defined within the SFAR as a "small airplane for purposes of parts 21, 23, 36, 121, 135 and 139." Nonetheless, for clarity purposes, the adopted language refers to SFAR 41 aircraft in the exclusion.

Another commenter proposed that the lead-in sentence for § 135.170(b) start with the phrase "Except for commuter category airplanes." The commenter's proposed addition was considered unnecessary due to the erroneous belief that commuter category airplanes, like those type certificated under SFAR 41, were not "large" airplanes. Because the FAA did not change the proposed rule language in the final rule to clarify this result, the rule language must now be amended.

This further amendment to the final rule is being handled in the most expeditious manner available, and is being made effective immediately, since the final rule is effective March 6, 1995. In the absence of this further amendment, SFAR 41 and commuter category airplanes without fire-blocked seat cushions and operated under part 135 would not be considered to be in compliance with the regulation. Explicitly excluding commuter category from having to comply with the requirements of § 135.170(b)(1) is not necessary because that section impacts only airplanes with a passenger seating capacity of 20 or more which does not apply to the commuter category. Nonetheless, because of frequent confusion among operators on that point, the FAA has decided to insert the commuter airplane category exclusion in § 135.170(b) rather than in § 135.170(b)(2) to make the applicability of these requirements clear.

Because this action imposes no additional burden on any person and since it relieves industry of the unintended burden that would be imposed if the new wording of § 135.170(b) was unchanged, it has no adverse economic impact and imposes no additional burden on any person. Accordingly, good cause exists to make this action effective immediately, but public comments are invited.

It should be noted that this action does not preclude the FAA from proposing that commuter category airplanes should comply with the seat cushion flammability standards of § 135.170(b)(2) in future rulemaking if such compliance is deemed necessary in the interest of safety. The FAA anticipates issuing by the end of this month, a proposal that would contain such a requirement applicable to current part 135 operators.

Amendment 135-57

Air Carrier and Commercial Operator Training Programs

Adopted: December 8, 1995

Effective: March 19, 1996

(Published in 60 FR 65940, December 20, 1995)

SUMMARY: This document amends the training and qualification requirements for certain air carriers and commercial operators by requiring certain certificate holders operating under part 135, and permitting certain others, to comply with part 121 training, checking, and qualification requirements, and mandating Crew Resource Management (CRM) training requirements for part 121 and 135 operators. The FAA is amending these rules in order to make certain part 135 training requirements as comprehensive as part 121 requirements and to incorporate recent knowledge about human performance factors. The rule also allows certain part 135 certificate holders to take advantage of sophisticated aircraft simulator training technologies presently available to part 121 certificate holders. By increasing the training and qualification requirements for certain operators, the rule is intended to reduce the risk of accidents and incidents. By mandating CRM training for certificate holders required to comply with part 121 training requirements, the rule is also intended to reduce the number of accidents and incidents that could be attributed to a lack of crew communication and coordination.

FOR FURTHER INFORMATION CONTACT: Mr. Larry Youngblut, Project Development Branch (AFS-240), Air Transportation Division, Flight Standards Service, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 267-8096.

SUPPLEMENTARY INFORMATION:

Availability of the Rule

Any person may obtain a copy of this rule by submitting a request to the Federal Aviation Administration, Office of Public Affairs, Attention: Public Inquiry Center (APA-230), 800 Independence Avenue, SW., Washington, DC 20591, or by calling (202) 267-3484. Requests must identify the amendment number and title of this rule.

Background

Parts 121 and 135 of Title 14 of the code of Federal Regulations contain rules that specify training program requirements for air carriers and certain commercial operators. Those rules specify the qualification requirements of crewmembers, flight and simulator instructors, check airmen, aircraft dispatchers, and other operations personnel. The most detailed and rigorous training and qualification requirements are those contained in subparts N and O of part 121. Although subparts N and O have been amended a number of times in recent years, most of the amendments concern the use of simulators, training devices, or specific training requirements such as security and the transportation of hazardous materials. No comprehensive changes have been made to these subparts since December 1969.

The FAA's most immediate concerns regarding the training and qualification regulations in part 121 and part 135 are twofold. First, compared to part 121 training regulations, part 135 training regulations do not provide a balanced mix of training and checking. Part 121 training and qualification regulations require both recurrent training as well as recurrent flight checks. Although part 135 requires flight training, flight checks can be repeatedly substituted for required training. Second, current parts 121 and 135 training regulations do not incorporate recent knowledge about the significance of human performance factors

result of a Northwest Airlines crash on August 16, 1987, in which 148 passengers, 6 crewmembers, and 2 people on the ground were killed. The NTSB noted that both pilots had received training only as individuals and not as an integral part of the cockpit crew during their last simulator training and proficiency checks. The last CRM training they had each received was 3.5 hours of ground school of general CRM training in 1983. The NTSB implied that the accident might have been prevented had the flight crew received adequate CRM training.

After soliciting ideas from other government agencies and from the aviation community, the FAA published a proposed Special Federal Aviation Regulation (SFAR) and an accompanying draft advisory circular (AC) in the *Federal Register* (54 FR 7670, February 22, 1989). These documents proposed a voluntary, alternative method of complying with the training requirements in current regulations. The voluntary alternative training is called an "advanced qualification program" (AQP). After considering comments received, the FAA issued a final SFAR 58, Advanced Qualification Program, and an accompanying Advisory Circular 120-54 (55 FR 40262, October 2, 1990). This voluntary program applies to certificate holders operating under part 121 or part 135 that elect the alternative requirements of AQP. The alternative requirement includes CRM training and evaluation, increased use of LOS, use of training centers, and the evaluation of flight training devices and flight simulators.

To date, the larger and more sophisticated air carriers have taken advantage of the voluntary program. The FAA expects this to be the case for the foreseeable future. However, the FAA recognizes that some operators, particularly smaller operators, may elect not to participate in the voluntary AQP program and will instead comply with current training requirements in parts 121 and 135; therefore, the FAA is amending the current training requirements of parts 121 and 135 to address the most immediate concerns regarding improved aircrew training and qualification standards. In particular, all certificate holders operating under part 121, and those certificate holders operating under part 135 who are authorized or required under this final rule to follow part 121 training and qualification requirements, are now also required by this rule to include CRM in their training programs.

Another recommendation from the National Transportation Safety Board (NTSB) was that commuter air carriers conducting operations under part 135 with airplanes that require two pilot crewmembers should also be required to comply with the training, checking, and qualification requirements of part 121.

Many regional air carriers operate under both a part 121 and a part 135 certificate because of the type of airplanes they fly. The FAA has encouraged these regional air carriers to train and qualify their pilots under part 121 rather than maintaining two separate training programs. Several of these air carriers have voluntarily required their pilots to be trained, checked, and qualified under part 121 or its equivalent.

The Rule

General Applicability

The amendments to part 121 apply to all certificate holders operating under part 121 and to all certificate holders operating under part 135 that are required to comply with the part 121 training and qualification requirements. The requirements also apply to certain part 135 certificate holders if they request and receive FAA authorization to comply with the part 121 training and qualification requirements.

Commuter Operations Conducted Under Part 135

Part 135 commuter operations serving small and medium sized communities carry millions of passengers every year. The Regional Airline Association (RAA), whose membership consists primarily of commuter air carriers, estimates that more than 61 million passengers will be carried by RAA member airlines in 1997. Comprehensive training requirements, including CRM training, are important to the safety of these operations. Part 121 training benefits these operations because it provides more emphasis on training, whereas current part 135 rules rely more heavily on the testing and checking requirements set forth

than the continuous checking and testing emphasis of subparts E, G, and H of part 135, this final rule requires the following certificate holders conducting commuter operations under part 135 to comply with the training, checking, and qualification requirements of part 121, subparts N and O, in place of the requirements of subparts E, G, and H of part 135: (1) Those that conduct commuter operations with airplanes for which two pilots are required by aircraft type certification rules, and (2) those that conduct commuter operations with airplanes having a passenger seating configuration, excluding any pilot seat, of 10 seats or more.

This final rule also allows the Administrator to authorize any other certificate holders that conduct operations under part 135 to comply with the training, checking, and qualification requirements of subparts N and O part 121. However, because of the size and complexity of the airplanes and the number and length of the flights conducted by these certificate holders, the FAA will permit these certificate holders to comply lower number of hours of operating experience under part 135 rather than those hours specified in § 121.434.

Each part 135 certificate holder that will comply with part 121 training requirements is required to submit and obtain FAA approval of a transition plan for converting from part 135 to the part 121 training and checking requirements. In that plan, the certificate holder should address issues such as: (1) Whether currently employed crewmembers need additional training to meet minimum part 121 training and qualification requirements; and (2) how the certificate holder's training curriculum will be modified, if necessary, to meet part 121 requirements.

Under § 121.405(g), as revised herein, a certificate holder may request a reduction in the programmed hours of ground training from the minimum hours required under present § 121.419. A reduction may be warranted in cases where a certificate holder shows that the airplanes it operates under part 135 are less complex than those generally operated under part 121. For this reason, certain part 135 certificate holders may have to modify their training program.

Crew Resource Management (CRM) Training

A major objective of this rule is to require all certificate holders operating under part 121 and those part 135 certificate holders who must comply with subparts N and O of part 121 as a result of this final rule to provide CRM training.

CRM training teaches crewmembers and aircraft dispatchers to use effectively all resources available to the crew (e.g. hardware, software, and all persons involved in aircraft operation) to achieve safe and efficient flight operations. Sections 121.404, 121.419(a)(1), 121.421(a)(1), 121.422(a)(1), and 121.427(b)(4) provide for the approval of CRM training and require CRM to be incorporated into ground training for flight crewmembers and aircraft dispatchers. Also, as part of this amendment, part 135 certificate holders who conduct training under part 121 must provide CRM training as part of their approved training programs.

The FAA anticipates that for a CRM training program to be approved, it would include three distinct components: (1) An indoctrination/awareness component, often called "initial CRM training," during which CRM issues are defined and discussed; (2) a recurrent practice and feedback component during which trainees gain experience with CRM techniques; and (3) a continuing reinforcement component which ensures that CRM principles are addressed throughout the trainee's employment with the certificate holder. Advisory Circular (AC) 120-51B, as amended, "Crew Resource Management Training," and AC 121-32, "Dispatch Resource Management" provide basic guidance in establishing approved CRM training. (In this amendment, the term "CRM" includes both crew resource management and dispatcher resource management.) DOT/FAA/RD-92-26, "Crew Resource Management: An Introductory Handbook," goes into further detail.

Section 121.404 includes initial CRM training for persons already employed by the certificate holder, and for new employees of the certificate holder, unless a new employee has completed the applicable

the FAA may credit part or all of such training toward the initial ground CRM training is required by §§ 121.419, 121.421, and 121.422.

The recurrent practice and feedback component of CRM training is best accomplished through the use of simulators and video equipment. However, if the use of simulators is not practical, CRM scenarios can be created without simulators, and practice can be tape recorded to provide feedback. Feedback should be directed by a facilitator who has had appropriate CRM training. Practice and feedback provide participants with critiques by one's self and peers to improve communication, decision-making, and leadership skills.

Numerous comments concerning requiring minimum program hours for CRM training were submitted. Regarding these comments, the FAA has determined that specifying a minimum number of programmed hours for CRM training is not required. Rather, the FAA will consider instructional techniques, number of students in a class, the use of simulation, new training technology, the use of student feedback, the measurement of training outcomes, as well as the number of hours of training time in evaluating and approving CRM training programs.

Many certificate holders already have approved CRM programs that are highly effective. The number of hours in these programs vary, however, the FAA's experience with these highly successful CRM training programs indicates that the most effective programs contain approximately 12 hours for pilot initial CRM training and 8 hours for flight attendant initial CRM training. Recurrent training under these established programs contain approximately 4 hours for pilots and flight engineers and 2 hours for flight attendants and aircraft dispatchers. In this final rule, the increase in minimum programmed hours for initial and recurrent training as proposed in Notice 94-35 (59 FR 64272, December 13, 1994) has been removed. The FAA will consider each certificate holder's CRM training program based on the program's ability to reach the training objectives rather than requiring minimum programmed hours for this training.

Editorial Clarification

The change to § 121.135(b)(15) makes it clear that the certificate holder's manual must include the entire training program curriculum required under § 121.403, not just the program affecting airmen.

Effective Date and Compliance Dates

The FAA has established an effective date of March 19, 1996. By that date, certificate holders operating under part 135 who are required to comply with applicable part 121 training and qualification requirements, must submit the transition plan required under § 135.3. The compliance date for training and qualifying under part 121 rules is 1 year after the effective date of the final rule.

For initial CRM training, the FAA has established a compliance date 2 years after the effective date of the final rule for flight crewmembers, and 3 years after the effective date of the final rule for flight attendants and aircraft dispatchers. After the applicable date, a certificate holder is prohibited from using a crewmember or dispatcher unless that person has completed approved crew or dispatcher resource management initial training. Since a large number of certificate holder employees are required to have this training, the delayed compliance dates will allow sufficient time to train instructors conducting CRM training, and then, in turn, provide this training to all crewmembers and dispatchers.

Consideration of Comments to the NPRM

On December 13, 1994, the FAA proposed these changes in a Notice of Proposed Rulemaking 94-35 (59 FR 64272). Seventeen comments were received. The following is a discussion and the FAA's response to the substantive subject areas.

Improvements in Safety

Comment: The National Transportation Safety Board (NTSB) strongly supports this proposal. The Board believes that the proposal is responsive to a number of their safety recommendations regarding

Comments: A number of commenters address the proposed requirement to add a specific number of training hours to be devoted specifically to CRM training.

USAIR Express comments that it supports the addition of CRM, but the hours stated in the regulation should be planned hours rather than programmed hours, indicating that this would provide more flexibility depending on class size. Also, all the training should be proficiency based. Pilot initial training should be 8 hours; 6 hours for flight attendants and dispatchers.

An individual commenter states that he supports the addition of CRM training to the training curriculum and recommends a requirement for at least 5 hours of full motion simulator CRM training for both initial and recurrent training, in addition to 24 classroom hours of initial training. Recurrent CRM training should be conducted annually and include 16 classroom hours.

The Air Line Pilots' Association (ALPA) recommends that the programmed times stated in the NPRM should be considered minimums on which to build a comprehensive CRM training program.

The Coalition of Flight Attendant Unions provides a joint comment for a number of flight attendant associations and concurs with the requirement of 8 hours for initial flight attendant training, but recommends an additional 2 hours be added to recurrent training, raising the requirement from 12 to 14 hours.

The Air Transport Association recommends that the FAA use a "train to proficiency" concept rather than specifying a certain number of hours for CRM training. This training should be integrated into other appropriate training.

Flight Safety International comments that the training should be "objective based" rather than specifying "block hours."

United Airlines (UAL) comments that it is in complete agreement with the proposal, except requiring programmed hours. UAL states that "the notion of programmed hours is bankrupt and that no training professional judges the adequacy of a training program by the number of hours spent on a given subject."

The Regional Airline Association recommends removing the "hard time" requirement of a specific number of hours for CRM training and instead recommends that CRM training be integrated into the operator's existing training program in an appropriate manner.

FAA Response: As stated previously, the FAA has removed the requirement for minimum programmed hours for approved CRM training programs. The FAA agrees that CRM training should be objective-based rather than based on a specific number of required hours. Therefore, in complying with this final rule, each individual certificate holder's CRM training program will be evaluated on its design to reach its stated training objectives. In evaluating CRM training programs, the FAA will consider how these training objectives are met and how the certificate holder measures training outcomes. The FAA will consider instructional techniques, class size, the use of simulation, new training technology, overall quality of training, and most importantly, student/instructor feedback and other evaluation methods in determining the adequacy of CRM training programs. The FAA also agrees that the principles of CRM should be integrated into other appropriate training and that these principles be practiced routinely throughout other company flight operations.

Comment: The Department of Psychology of the University of Texas at Austin supports the proposal to add CRM training to the rule. However, they state that CRM training must be designed to the specific needs of the airline and its operating environment and that an evaluation of the human factors training must be included in each certificate holder's approved CRM program.

FAA Response: The FAA agrees with the commenter that CRM training programs should be designed to meet the specific needs of the certificate holder's operating environment and that a continuing assessment of the CRM training program should be accomplished to determine if the program is achieving its goals. Information on designing CRM programs that are specific to the needs of the certificate holder and

training principles should be incorporated into the certificate holder's entire operation. of CRM must be learned first before they can be integrated into the certificate holder's entire operation.

Comment: An individual commenter recommends that CRM training be conducted for at least 3 hours in a full motion simulator.

FAA Response: Training in a full motion simulator would provide excellent training; however the FAA believes that mandating CRM training in a "full motion" simulator is not necessary to learn and practice CRM skills.

Comment: The Coalition of Flight Attendant Unions mentions that there is no provision to address giving or denying credit for training already accomplished if the employee changes carriers, for example, moving from a regional carrier to the parent carrier. The group also proposes rewriting § 121.421 (iii) to include wording from AC 120-51B which would ensure a minimum level of quality control.

FAA Response: Section 121.404 as adopted in this final rule provides that a flight attendant who receives initial training from one certificate holder does not have to repeat that training for another certificate holder.

The FAA does not agree with the commenter that the regulation as proposed should be rewritten to include the three CRM training phases as discussed in AC 120-51B, i.e., initial indoctrination and awareness, practice and feedback, and evaluation phases. An approved CRM training program should include the training objectives stated in the AC. However, the FAA believes there is more than one way to achieve these training objectives. Each certificate holder must determine the most practical and efficient way to meet the general training criteria stated in AC 120-51B.

Comment: The Air Transport Association (ATA) recommends reorganizing some of the proposed sections, generally consolidating them into other sections of the proposed rule; and provides a detailed rewrite of the § 121.423.

FAA Response: The FAA does not agree that the rule language should be rewritten under a new § 121.423, since it appears that ATA's rewrite basically provides training credit for CRM training received after the effective date of this final rule; this credit is already provided in § 121.406 which will be adopted as proposed.

Comment: Flight Safety International recommends that the rule include the requirement for assessment, design, and implementation of the CRM training program. The commenter provided a detailed discussion how to improve each of these facets.

FAA Response: The comments of Flight Safety International regarding the requirement for assessment, design and implementation of the CRM training program have merit and are addressed in AC 120-51B.

Comment: The Regional Airline Association generally supports the rule but recommends that the rule include specific reference to part 121, Appendices E, F, and H, and the record keeping requirements of § 121.683.

FAA Response: The FAA does not concur regarding the recommendation that the rule include specific reference to Appendices E, F, and H, which elaborate on flight maneuvers. The certificate holder may include CRM while training on flight maneuvers, but the FAA does not want to limit or mandate CRM during each specific training maneuver. Also, the FAA believes that the detailed record keeping requirements of § 135.63 are more than adequate for affected part 135 operators.

Comment: One individual commenter believes that CRM could not be defined; to attempt to do so, "goes exactly against the spirit of CRM." Instead, he felt that the flightcrew should pursue "a spontaneous program of people trying to discover ways to relate more harmoniously." Therefore, any effort to formalize CRM training was counterproductive.

this rule is outside the scope of the NPRM.

Comments: A number of commenters address the issue of the importance of the training given to those who are responsible to approve, conduct, and evaluate CRM training.

The Department of Psychology of the University of Texas at Austin feels that there should be provisions for specialized training of check pilots, flight instructors, and FAA Flight Standards personnel who must not only be aware of the concepts of CRM, but also must be able to debrief and instruct others in the facets of the program. The commenter also suggests that CRM principles and requirements be included in the airline's flight manuals.

USAIR Express comments that the FAA's Principal Operations Inspectors must be trained in detail to effectively assess and evaluate CRM training programs; otherwise, operators may have difficulty getting curriculum segments approved or getting credit for previously conducted training.

ALPA notes that the facilitators of CRM training must have the highest experience and qualifications to properly evaluate this training.

Flight Safety International emphasizes that instructors and check pilots need specialized training in CRM observation and debriefing skills.

The Regional Airline Association notes that FAA inspectors who are responsible for evaluating, approving, and monitoring the effectiveness of the operator's CRM programs will need additional training for this responsibility.

The Air Transport Association comments that the FAA should ensure that the inspectors who evaluate this program must be highly trained.

FAA Response: The FAA agrees with all these commenters. In addition to establishing a training course for POIs, the FAA has included information in the air carrier inspectors' handbook and AC 120-51B that provides guidance in the approval process. This information is also available to instructors and check pilots.

Compliance Period

Comments: The Department of Psychology of the University of Texas at Austin comments that the compliance period of 2 years for flight crews and 3 years for dispatchers and flight attendants seemed excessive and should be shortened.

The group of flight attendant associations recommends that the proposed compliance period of 2 years for pilots, and 3 years for flight attendants and dispatchers, be shortened to 1 year and 2 years respectively, based on the significance of the rule to the traveling public and its ease of implementation.

ALPA fully supports the proposal and strongly urges the FAA to implement the final rule at the earliest opportunity.

FAA Response: The FAA has adopted a compliance period of 2 years for over 76,000 flight crewmembers and 3 years for over 84,000 flight attendants and dispatchers who require initial CRM training. The FAA encourages certificate holders to develop an approved CRM training program and begin training as soon as possible. However, the FAA believes that to require total compliance in a shorter time than proposed could be a significant economic burden on some certificate holders because training would then have to be accomplished outside the normal, scheduled recurrent training cycle.

Comment Period

Comment: The Alaska Air Carriers' Association suggests extending the comment period to June 23, 1995 to be aligned with another proposal affecting commuter airlines in the area of aircraft certification and general operations.

the belief that CRM training would not be 100% effective. Also, the commenter questions the FAA's position that the rule would not have a significant economic impact on a substantial number of small entities.

Comment: A group of flight attendant associations comments on the estimated cost of initial and recurrent CRM training for flight attendants, providing training costs and per diem information on nine representative carriers.

Comment: The National Air Transport Association expresses concern that, for all part 135 operators who operate aircraft with two pilot crews carrying 10 or more passengers, the proposal may be administratively and economically burdensome. Therefore the Association opposes the FAA proposal to mandate compliance with part 121 training standards. It feels that compliance with part 121 training, including CRM, should be voluntary for part 135 commuter carriers operating aircraft with 10 to 19 seats.

FAA Response: The FAA has reviewed the commenter's points and addressed them in the Regulatory Evaluation of the final rule.

Regulatory Evaluation Summary

This section summarizes the full regulatory evaluation that provides more detailed estimates of the economic consequences of this regulatory action. This summary and the full evaluation quantify, to the extent practicable, estimated costs and anticipated benefits to the private sector, consumers, and Federal, State, and local governments.

Proposed changes to federal regulations must undergo several economic analyses. First, Executive Order 12866 directs that each federal agency shall propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 requires agencies to analyze the economic effect of regulatory changes on small entities. Third, the Office of Management and Budget directs agencies to assess the effect of regulatory changes on international trade. In conducting these analyses, the FAA has determined that this Final Rule would generate benefits that justify its costs and is a "significant regulatory action" as defined in the Executive Order. The FAA estimates that the Final Rule will not have a significant economic impact on a substantial number of small entities. No part of the rule is expected to constitute a barrier to international trade. These analyses are provided in the docket and are summarized below.

Response to Comments on the Original Regulatory Evaluation

Two interested parties submitted comments concerning the preliminary regulatory evaluation. Their comments and FAA's disposition are summarized below by subject area.

Wages

Comment: The Coalition of Flight Attendant Unions states that the \$27 hourly compensation rate used for part 121 flight attendants seems "excessive."

FAA Response: In response to this comment, the FAA recalculated the hourly compensation rate for part 121 flight attendants based on the Future Aviation Professionals of America's (FAPA) 1994-1995 *Flight Attendant Directory of Employers & Salary Survey*. These data support the \$27 hourly compensation rate for flight attendants who have been employed for 5 years.

Initial Training

Comment: The Coalition of Flight Attendant Unions states that air carriers do not typically pay or provide benefits to flight attendants during initial training because the trainees are not yet employees. According to the commenter, the provision of lodging and meals during initial training varies among carriers. Many carriers will pay for lodging, some will pay for meals, some provide a small stipend, and some do not defray meal costs at all.

Comment: The Coalition of Flight Attendant Unions states that compensation during recurrent training varies among carriers. Some carriers pay no salary during training, while others pay a contractual level substantially below the working flight attendant rate, according to the commenter. Also, some carriers pay per diem while others do not. This commenter provided a brief summary of flight attendant training costs for selected major, national, and regional air carriers.

FAA Response: After reviewing this comment, the FAA has decided to use the compensation rate for a fifth-year flight attendant to compute the compensation rate for recurrent training (\$23 for part 135 and \$27 for part 121). Based on the discussion above, the evaluation assumes that flight attendants are compensated at their hourly flight rate. Per diem is estimated at \$125, regardless of whether the airline or the flight attendant absorbs this cost.

Training Hours

Comment: The Coalition of Flight Attendant Unions states that, based on experience, reductions in training hours are routinely requested and are nearly as routinely granted. The commenter concludes that, following approval of credits and reductions, this rule could result in some carriers absorbing hourly requirements of CRM initial and recurrent training into existing initial and recurrent training programs.

FAA Response: The FAA recognizes this concern, but for purposes of this regulatory evaluation, the cost estimate is based on the average number of planned hours on which established programs are based. For some operators, therefore, such costs may be overstated.

CRM Training Benefits

Comment: The U.S. Small Business Administration (SBA) states that the FAA overestimated the benefits of CRM training for part 135 operators. The SBA states that the FAA assumed that such training would be 100 percent successful in eliminating accidents attributable at least in part to coordination problems. The SBA believes that this is an overly optimistic scenario and encourages the FAA to examine the accident rate of operators who already have CRM programs and use it as the basis for estimating benefits of the training.

The SBA further encourages the FAA to confirm whether the accident rate for part 135 operators resulting from crew coordination problems includes only accidents involving the types of aircraft affected by the rule. According to the commenter, the FAA did not specify whether the accidents involved were the types of part 135 aircraft subject to the rule. In contrast, in estimating the benefits of raising part 135 training to part 121 levels, the FAA specified that the accidents involving part 135 aircraft were of the type affected by the proposal. If the accident rate included part 135 aircraft other than the types covered by the proposed regulation, then the FAA would overestimate the proposal's benefits. For an accurate assessment of CRM's benefits, the FAA must confirm that the accident data used for estimating CRM's benefits is limited to the types of planes covered by the proposal for part 135 operators.

FAA Response: With respect to the comment on effectiveness, the FAA does not expect the rule to be 100 per cent effective. Based on our calculations, the part 135 CRM requirements need to reap only 4 per cent of the estimated benefits to be cost beneficial. The commenter is correct with respect to the accidents included. The final regulatory evaluation has been changed to consider only those accidents involving aircraft affected by this rule.

Regulatory Flexibility Analysis

Comment: The SBA states that the proposal's regulatory flexibility analysis is not in conformance with the Regulatory Flexibility Act (RFA). First, according to the commenter, the FAA did not provide the public with the opportunity to assess the FAA's justification for its criteria for evaluating the significance of a rule's economic impacts. Second, the FAA did not adhere to the procedures for establishing a small business definition different from the definition under § 3 of the Small Business Act. Prior to

Part 121 Equivalent Training for Part 135 Crewmembers

The rule requires 121 training and qualification standards for part 135 crewmembers engaged in operations using airplanes certificated for two pilots or having 10 or more passenger seats. Newly hired part 135 pilots and flight attendants will be required to receive the initial part 121 training. Existing part 135 pilots and flight attendants will not need to repeat initial training but will be subject to recurrent training requirements. During their first recurrent training session, however, existing employees must meet the newly required part 121 training and qualifying standards.

Incremental training costs were determined as the difference between current and projected training costs. For example, the incremental cost of initial training was estimated to be \$3,999 for a PIC and was determined by adding pilot compensation, travel and per diem, and other costs and subtracting current costs.

Initial training costs for PICs, SICs, and flight attendants will increase by about \$230,000 per year. The cost for first year recurrent training for flight crewmembers will increase by \$1.3 million because each currently employed crewmember will be required to meet the part 121 training and qualification standards. The cost for recurrent training after the first year will increase by \$1.75 million.

The discounted incremental cost to part 135 operators over the ten year period is estimated to be about \$17 million.

Part 121 CRM Training

The number of PICs, SICs, and flight engineers undergoing training during the two-year phase-in period equals 65 percent of the existing number of employees plus new hires (the FAA estimates that 35 percent of pilots are already receiving CRM training through the AQP). The cost for the initial two-year phase-in training will be approximately \$7.5 million each year. The cost for initial CRM training after the phase-in period (which applies to new hires only) will be approximately \$2 million. Recurrent training costs for existing employees will be about \$17 million annually.

The number of flight attendants and dispatchers undergoing training during the three-year phase-in period equals the existing number of employees plus new hires. For flight attendants and dispatchers, initial training over the three-year phase-in period will cost about \$4 million annually. Initial training after the third year for new hires will amount to approximately \$3.5 million annually. Recurrent training for existing employees will cost about \$6 million each year.

Over the ten-year period, the total discounted cost will equal about \$230 million.

Part 135 CRM Training

CRM awareness training for pilots for the two-year phase-in period will cost approximately \$300,000 per year. After the second year, initial training costs will equal about \$67,000 each year. Annual recurrent training costs will be about \$600,000.

Initial CRM awareness training for flight attendants will cost about \$31,000 per year. The cost for initial training conducted after the phase-in period will equal about \$12,000 annually. The annual cost for recurrent training will be about \$23,000. Over the ten year period, discounted CRM training costs for the part 135 operators will equal about \$6 million.

Total Cost

The total discounted cost of the rule will be approximately \$253 million over the next 10 years. The cost of CRM training for part 121 operators accounts for the largest portion.

operators flew 25.5 million flights resulting in a commuter accident due to pilot error of 1.1775 accidents per million commuter flights. The average value of avoiding such an accident is estimated to be \$9.607 million.

In estimating the maximum potential value of the benefits, the FAA assumes that: (1) Because part 135 operators will not complete training for two years, no expected benefits will result after the first year and, at most, only one-half of the potential benefits will be achieved in the second year (full benefits will be achieved in the remaining years); and (2) the rule will not eliminate all pilot error accidents but will, at best, only reduce the part 135 pilot-error accident rate down to the rate sustained by part 121 operators. However, the FAA does not expect this rule to completely eliminate the differential in the pilot-error accident rate because the higher part 135 accident rate could be caused by factors other than pilot training; less pilot experience might also result in a higher pilot-error accident rate for part 135 operations.

The FAA estimated the value of potential benefits by multiplying the average value of a part 135 pilot-error related accident (\$9.607 million) by the number of potential accidents (accident rate times projected flights). The value of potential benefits was then adjusted to equal the part 121 pilot-error accident rate. The pilot-error accident rate for part 121 airplanes was determined by conducting a search of the part 121 accident database. The FAA determined that this database contained 38 accidents in which pilot error was the probable cause. Given that part 121 airplanes flew 61.55 million flights during this period, the pilot-error accident rate is estimated to be 0.6174 accidents per million flights. By subtracting the part 121 accident rate from the part 135 accident rate $[(1.1775 - 0.6174) = .5601]$, the available reduction in the part 135 accident rate is estimated to equal .56 accidents per one million flights.

Over the ten-year period, the estimated value of the benefits of this provision is about \$196 million. When current practice is taken into consideration (30 percent of relevant pilots are already trained under part 121 under an RAA exemption), the ten-year, benefit of this provision is estimated to be \$111 million.

Part 135 Crew Resource Management Training

During the period 1984 through 1993, crew coordination was a probable cause in 9 accidents involving part 135 aircraft affected by this rule. The 9 accidents were responsible for 45 fatalities and 7 serious injuries. During this period, commuter operators flew 25.5 million flights resulting in a commuter accident rate due to crew coordination problems of 0.3529 accidents per million commuter flights. The average value of avoiding such an accident was estimated to be about \$15.3 million. This estimated accident cost is considerably higher than the estimated accident cost used in the part 135 training upgrade benefit section. The difference results, in part, from the size of the samples. Thirty accidents were attributable to pilot error and only nine to crew coordination. The three high-cost accidents associated with crew coordination drive up the average cost of those accidents.

Initial training will begin in 1996 and continue through 1997. Therefore, the FAA assumes that full benefits cannot be achieved by this rule until 1998. The FAA estimates the value of benefits by multiplying the average value of a part 135 CRM-related accident (\$15.3 million) by the number of potential accidents (accident rate times projected number of flights). Over the ten year period, the benefits of this provision are estimated at \$163 million (discounted). However, the FAA expects to realize only some of these benefits by imposing this requirement.

Part 121 Crew Resource Management Training

During the period 1984 through 1993, crew coordination was a probable cause in 17 accidents involving part 121 aircraft. These 17 accidents resulted in 181 fatalities, 45 serious injuries, and 130 minor injuries. During this period, air carriers flew 61.55 million flights resulting in an air carrier accident rate due to crew coordination problems of 0.2762 accidents per million flights.

Total Benefits

Benefits of this rule are estimated to total \$579 million. The largest share of benefits, about \$305 million, is attributed to part 121 CRM training. Part 135 CRM training and upgraded pilot training will account for about \$163 million and \$111 million, respectively.

Cost-Benefit Comparison

The FAA estimates that this rule will cost approximately \$253 million over 10 years. The benefits are estimated to be \$579 million. With respect to the part 135 flight crew training upgrade, the discounted training costs will be about \$17 million, and the discounted value of the expected benefits is \$111 million. With respect to part 135 CRM training, the discounted training costs will be about \$6 million, and the discounted value of the expected benefits is \$163 million. With respect to part 121 CRM training, the discounted training costs will be about \$230 million, and the discounted value of the expected benefits is \$305 million.

The estimated total cost of the rule has decreased significantly since the NPRM was published. Changes in assumptions—based on additional information about industry practice—were primarily responsible for the adjustments. The final analysis takes into consideration, for example, that 35 percent of part 121 pilots are already receiving and will continue to receive CRM training under AQP. It also takes into account that 30 percent of the part 135 pilots—those employed by dual-certificated operators—already train under part 121. Based on current information, the FAA has also adjusted its assumptions about new-hire rates and the costs of travel and instruction associated with training. In total, these adjustments lead to a lower estimated incremental cost of this rule.

To be cost beneficial, this rule does not have to be 100 percent effective in preventing the types of accidents that it is designed to prevent, nor does the FAA claim that these requirements will prevent all of the accidents for which this rule was designed. If the part 135 training upgrade is only 16 percent effective at preventing these accidents, then the benefits of this requirement will exceed the costs. CRM training for part 135 flight crews needs to be only 4 percent effective for the benefits to exceed the cost of that requirement. However, CRM training for part 121 flight crews needs to be over 75 percent effective for this requirement to be cost-beneficial.

The requirements for upgrading part 135 pilot training should be considered complementary to the proposed Commuter Rule (while the two CRM requirements are independent of the Commuter Rule). The goal of both the Commuter Rule and the part 135 training upgrade requirement is to reduce the accident rate of scheduled carriers operating 10-to-30-seat airplanes under part 135 to the existing part 121 accident rate. The benefits of the part 135 training upgrade requirement are part of the benefits estimated for the Commuter Rule, and they cannot be separated from that rule because it is not possible to determine which rule would have prevented a given accident. For example, individual accidents may be prevented by any one of several factors, such as prevention of the occurrence of a problem with an airplane in the first place, by providing more or better crew training to properly respond to the problem after it occurs, or providing a dispatcher to help identify a problem before it becomes a potential accident. For this reason, the FAA has chosen to combine the estimated costs of upgrading part 135 pilot training with the cost of the Commuter Rule and compare these combined costs with the estimated benefits of the Commuter Rule. When the estimated cost of the part 135 pilot training upgrade requirement (\$17 million) is added to the estimated costs for the Commuter NPRM (\$275 million), the combined costs (\$292 million) are still less than the estimated benefits of the Commuter NPRM (\$393 million). The estimated costs and benefits will probably be different in the Commuter Final Rule, but the estimated cost of the Commuter Final Rule plus the \$17 million for the part 135 pilot training upgrade requirement is still expected to be less than the estimated benefits for the Commuter Final Rule.

The relevant FAA criteria for a significant impact are incremental cost of \$67,800 per year for a scheduled air carrier with a fleet size of 60 seats or fewer, and \$121,300 for a scheduled air carrier with a fleet size of more than 60 seats). (All monetary values are in 1994 dollars).

Final Regulatory Determination

The FAA identified 39 part 121 operators who operate 9 or fewer aircraft. In addition, the FAA identified another 9 operators who are split certificate holders and operate under both parts 121 and 135. For this analysis the FAA determined that the split certificate holders are currently operating under the higher level of safety required under the part 121 requirements. The FAA determined that, on average, the crew on these aircraft consist of one pilot-in-command, one second-in-command, and three flight attendants. Also, these operators will likely employ two crews per airplane. The FAA determined that in the first year (1996) two PICs, two SICs, and six flight attendants will receive initial training. In the next three years (1997-1999), these crewmembers will receive recurrent training. In the fifth year (2000), there will be a turnover in the crew: 1 PIC, 1 SIC, and 2 flight attendants will be replaced by new employees who will need initial training. Over the following three years (2001-2003), all crewmembers will receive recurrent training. The next year (2004), there will again be a turnover in employees. And, in the final year (2005), the crewmembers will receive recurrent training. The discounted cost over the ten-year period for the part 121 requirements will be about \$15,800 per aircraft, or about \$2,250 annualized. An operator owning nine airplanes will incur an annualized cost of about \$20,252. Thus, a part 121 operator will be able to own at least nine aircraft and remain below the annualized cost threshold of \$67,800 for small scheduled operators. The FAA has also determined that part 121 CRM training costs will not impose a significant burden on a substantial number of large scheduled part 121 operators which have a higher threshold of \$110,100.

The FAA identified twenty part 135 scheduled operators that own 9 or fewer aircraft (which require two pilots or have 10 or more passenger seats). The discounted cost for part 135 flight crew upgrade and CRM training will be about \$53,332, or about \$7,593 annualized. Of this amount, CRM training accounts for about \$15,362 discounted, or about \$2,187 annualized, and flight crew upgrade training accounts for \$37,970 discounted, or about \$5,406 annualized. This estimate is based on an average of two crews per aircraft with each crew consisting of a PIC, a SIC, and two flight attendants. This estimate includes initial training and recurrent training over the ten year period. Training costs for large scheduled part 135 operators with 9 airplanes ($9 \times \$7,593 = \$68,337$) will not exceed the threshold for these operators (\$121,300). However, training costs for small scheduled part 135 operators with more than 8 aircraft will exceed the threshold cost ($8 \times \$7,593 = \$60,744$). FAA data show that only one of the 20 affected small part 135 operators operate nine aircraft. As this number is less than 11, it does not meet the definition of a "substantial number." Therefore, the FAA has determined that the rule will not have a significant economic impact on a substantial number of small part 135 operators.

International Trade Impact Statement

The FAA has determined that this rule will not constitute barriers to international trade, including the export of U.S. goods and services to foreign countries and the import of foreign goods and services into the United States.

Federalism Implications

These regulations do not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among various levels of government. Thus, in accordance with Executive Order 12612, it is determined that such a regulation does not have federalism implications warranting the preparation of a Federalism Assessment.

Paperwork Reduction Act

The reporting and recordkeeping requirement associated with this rule was approved by the Office of Management and Budget (OMB) in accordance with 44 U.S.C. Chapter 35; there are no changes

The Amendment

The Federal Aviation Administration amends parts 121 and 135 of the Federal Aviation Regulations [14 CFR parts 121 and 135] effective March 19, 1996.

The authority citation for part 135 is revised to read as follows:

Authority: 49 U.S.C. 106(g), 1153, 40101, 40105, 44113, 44701-44705, 44707-44717, 44722, and 45303.

Amendment 135-58

Commuter Operations and General Certification and Operations Requirements

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SUMMARY: This rule requires certain commuter operators that now conduct operations under part 135 to conduct those operations under part 121. The commuter operators affected are those conducting scheduled passenger-carrying operations in airplanes that have passenger-seating configurations of 10 to 30 seats (excluding any crewmember seat) and those conducting scheduled passenger-carrying operations in turbojet airplanes regardless of seating configuration. The rule revises the requirements concerning operating certificates and operations specifications for all part 121, 125, and 135 certificate holders. The rule also requires certain management officials for all certificate holders under parts 121 and 135. The rule is intended to increase safety in scheduled passenger-carrying operations and to clarify, update, and consolidate the certification and operations requirements for persons who transport passengers or property by air for compensation or hire.

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Background

I. Introduction

On March 29, 1995, the Federal Aviation Administration (FAA) published a Notice of Proposed Rulemaking (NPRM) on “Commuter Operations and General Certification and Operations Requirements” (Notice No. 95-5; 60 FR 16230.) In Notice 95-5, the FAA proposed that commuter operations conducted in airplanes with 10-30 passenger seats be conducted under the domestic or flag rules of part 121 of title 14 of the Code of Federal Regulations. Currently, scheduled passenger-carrying operations in airplanes with passenger-seating configurations of over 30 seats or more than 7,500 pounds payload capacity are conducted under part 121. Scheduled passenger-carrying operations in airplanes with passenger-seating configurations of 30 seats or less and 7,500 pounds or less payload capacity are conducted under part

passengers in on-demand air taxi service. The rules under which those operations were conducted were eventually codified as part 135. Airplanes with an MCTW of more than 12,500 pounds were defined as "large airplanes," and most large airplanes carried 20 or more passengers in scheduled air transportation. The Civil Aeronautics Board (CAB) used the large/small dividing line to separate major airline companies, who were required to obtain a Certificate of Public Convenience and Necessity (CPCN) from the CAB in order to operate in interstate commerce as a common carrier, from on-demand air taxi operators, who were exempted from obtaining a CPCN.

During this time, the CAB issued only a small number of CPCN's to major, publicly-recognized companies, such as Eastern, American, Delta, Pan Am, TWA, etc. In contrast, on-demand air taxi operators numbered in the thousands. These operators were typically fixed-base, usually at small airports, and owned fewer than five airplanes. They provided on-demand air transportation as well as other services, such as training new pilots and selling and renting small airplanes. Typically, the air taxi portion of such an operator's business was a small part of that business and rarely involved any scheduled operations.

Beginning in the late 1960's, airplane manufacturers began to design and build small airplanes, that is, less than 12,500 pounds maximum certified takeoff weight, that were capable of carrying more than 10 passengers, often close to 20. Some air taxi operators began to offer services that resembled the services of the major airlines, given the economic opportunity to operate under the less restrictive requirements of part 135. Though these scheduled commuter operators began to overtake some air taxi operations, they still remained a small percent of the thousands of air taxi operators.

In 1978, as a result of the Airline Deregulation Act, the airline industry was deregulated economically and air carriers were given more freedom to enter and exit markets without prior government economic approval. One of the most significant effects of this deregulation was that it allowed major carriers to eliminate service to smaller communities, where such service proved to be uneconomical for the large aircraft the carriers operated. Major carriers were replaced in those communities by the commuter carriers. Under this "hub and spoke" system, the major part 121 air carriers provided service to the large metropolitan airports, while the growing class of scheduled part 135 air carriers provided service between smaller communities as well as feeder service from the smaller communities to the larger cities to connect with the major carriers' operations. With these changes, the traditional two categories of operations became three categories of operations—scheduled commuter operations, traditional air taxis, and traditional major air carriers.

Also in 1978, in response to the Airline Deregulation Act, the FAA reissued part 135 standards to upgrade commuter and air taxi safety requirements and make them more like part 121. At that time part 135 certificate holders were required to meet more stringent requirements in several areas, including weather reporting, flightcrew training, maintenance, and qualifications for management personnel.

Since 1978, the FAA has issued a number of separate rule changes to further align part 135 safety requirements with those in part 121. Despite this realignment, differences between the regulations still exist. The economic incentive to operate under part 135 still exists because the requirements in part 135 are still less restrictive than the part 121 requirements in many instances.

For the remainder of this document the following terms are used in the following ways. "Commuter," "commuter airline," and "commuter operator" mean those operators conducting scheduled passenger-carrying operations under part 135 in airplanes with a passenger-seating capacity of 30 or fewer seats. This current use of the word "commuter" does not include scheduled passenger-carrying operations conducted under part 121 in airplanes with a seating capacity of 31 to 60 seats. The term "commuter category airplane" used in this document refers to airplanes type certificated in that category under part 23 in contrast to airplanes type certificated under part 25 which are transport category airplanes. The term "nontransport category airplanes" is used for commuter category airplanes and SFAR 41 and predecessor normal category airplanes to be operated under part 121, as well as for some older airplanes certificated before the predecessors of part 25 (parts 04 and 4b of the Civil Air Regulations) came into existence. The Department of Transportation (DOT) uses the term "commuter" more broadly to

to improve, accident data, public perception, and recent government inquiries show a need for additional measures.

III.A. Accident Rate for Commuter Operations

The airline industry that uses airplanes with a passenger-seating capacity of 60 or fewer seats to conduct scheduled operations under parts 121 and 135 is an essential part of the air transportation network in the U.S. These airlines now fly more than all airlines did in 1958. In 1993, over 50 million passengers, 12 percent of the total passenger flights in the country, were flown by these airlines. Half of these passengers were flown in part 135 operations, i.e., in aircraft with 30 or fewer seats.

Over the past two decades the safety record of part 135 commuters has greatly improved. The accident rate per 100,000 departures in 1993 was one-fourth the accident rate in 1980. However, the accident rate for commuter airlines operating under part 135 continues to be higher than the rate for domestic part 121 airlines. In the past 2 years, several commuter airline accidents occurred that attracted media and public attention and caused government and industry officials to scrutinize the safety system for commuter operations under part 135.

These accidents included the December 1, 1993, crash of a Jetstream 3100, operated by Express II (as Northwest Airlink), at Hibbing, MN; the January 7, 1994, crash of a Jetstream 4100, operated by Atlantic Coast Airlines (as United Express), at Columbus, OH; and the December 13, 1994, crash of a Jetstream 3200, operated by Flagship Airlines (as American Eagle), at Raleigh-Durham, NC. All of these accidents involved fatalities.

III.B. Public Perception

With the increase in the number of flights to many communities conducted in airplanes with a seating capacity of 30 seats or less, some members of the public are questioning whether they are receiving an appropriate level of safety in small propeller-driven airplanes compared to the level of safety they receive in larger aircraft. This public concern is partly a result of the integration of commuter carriers with major airlines under an arrangement known as code-sharing. The term "code-sharing" refers to the computerized airline reservation system that lists a commuter flight in the reservation system under the same code used by a major carrier. A passenger who books with a major carrier may have a leg of the flight automatically booked with a smaller commuter affiliate of the major carrier.

With the media attention to recent commuter accidents, the passenger may also believe that the flight involves more risk because the smaller airplane and its operation may not have to meet the same safety standards. Most passengers probably do not realize that some differences in standards are necessary because of differences in the airplane and operation and that some of the accidents that are categorized by the media as "commuter" accidents occurred in flights that were being conducted under part 121; that is, in airplanes with over 30 passenger seats.

The differences in regulations were initially based on differences in the types of operations and differences in the size of airplanes; these differences in many instances still apply. But other differences, such as certain performance and equipment requirements, operational control requirements, and passenger information requirements are not size- or operationally-based. Some differences between the two sets of regulations must be maintained while others can be eliminated to improve the safety of commuter operations.

III.C. Congressional Hearings

On February 9, 1994, Congress held hearings on the adequacy of commuter airline safety regulations. The purpose of the hearings was to determine if FAA safety regulations should be modified to establish a single standard for all scheduled operations regardless of airplane size. Representatives of government, industry, and the public presented testimony. Most testimony supported the upgrading of safety requirements.

in passenger aircraft. The NTSB found that there has been a trend in the industry toward operating larger, more sophisticated aircraft, and many carriers have established code-sharing arrangements with major airlines. The NTSB concluded that the regulations contained in 14 CFR part 135 have not kept pace with changes in the industry.

As a result of the findings, the NTSB issued the following safety recommendations to the FAA:

- Revise the Federal Aviation Regulations such that all scheduled passenger service conducted in aircraft with 20 or more passenger seats would be conducted in accordance with the provisions of 14 CFR part 121. (A-94-191)
- Revise the Federal Aviation Regulations such that all scheduled passenger service conducted in aircraft with 10 to 19 passenger seats would be conducted in accordance with 14 CFR part 121, or its functional equivalent, wherever possible. (A-94-192)

In the 1994 study, the NTSB examined the differences in flight dispatch requirements between parts 121 and 135. The NTSB found that, in the absence of support from licensed dispatch personnel, it is difficult for a part 135 pilot to accomplish several tasks between flights in the short periods of time available. The lack of support might increase the risk of critical mistakes that could jeopardize the safety of flight. As a result the NTSB issued the following recommendation to the FAA:

Require principal operations inspectors (POI) to periodically review air carrier flight operations policies and practices concerning pilot tasks performed between flights to ensure that carriers provide pilots with adequate resources (such as time and personnel) to accomplish those tasks. (A-94-193) The FAA published all of the NTSB recommendations in the *Federal Register* (59 FR 63185, December 7, 1994) and received public comments generally supporting the expansion of the operational rules of part 121, except for flight time limitations, to commuter operations under part 135. Some commenters had considerable reservations about applying certain part 121 equipment requirements to smaller airplanes. The FAA considered these comments in developing this rule.

III.E. Related FAA Action

In December 1994, the FAA proposed revisions to the training and qualification requirements of certificate holders conducting commuter operations under part 135. The proposed rule also addressed crew resource management training for pilots, dispatchers, and flight attendants in part 121. (59 FR 64272, December 13, 1994) [Add Final Action]

IV. The Proposed Rule and General Description of Comments

In Notice 95-5, the FAA proposed to require that all scheduled passenger-carrying operations in airplanes with a passenger-seating configuration of 10 or more seats (excluding any crewmember seat) and all scheduled operations in turbojets (regardless of the number of seats) must be conducted under part 121. The proposal would require certificate holders now conducting scheduled passenger-carrying operations under part 135 in airplanes with a passenger-seating configuration (excluding any crewmember seat) of 10 to 30 seats or in turbojets to be recertificated and to conduct the applicable operations in compliance with part 121 requirements. In some instances the proposed rule revised the requirements of part 121 to make compliance with the requirements feasible for operations in smaller, nontransport category airplanes.

In response to Notice 95-5, the FAA has received over 3,000 comments from the public. Of these, most are solely on the issue of the Age 60 Rule. Many of the Age 60 commenters are pilots and other individuals who address the current rule in part 121; very few address the specific Age 60 issue contained in this rulemaking, i.e. the applicability of the Age 60 Rule to pilots of affected commuter airplanes. These comments are summarized in section V.E., The Age 60 Rule.

Approximately 200 comments were received on the substantive issues raised by Notice 95-5. These commenters represent air carriers; manufacturers; associations representing air carriers, manufacturers, pilots,

In Notice 95-5, the FAA identified major issues that the agency addressed in developing the proposal. These included applicability of the proposal, aircraft certification issues, flight time limits, the Age 60 Rule, use of a dispatch system, certain equipment items, and the compliance schedule. Comments received on these major issues and the FAA's response to these comments are discussed in section V. Comments received on specific proposals and the FAA's response to these comments are discussed in section VI. Comments specifically addressing cost issues are discussed in section VII. Below is a list of some of the major commenters and their associated abbreviations. The full name of each commenter is used when the commenter is first mentioned. In subsequent discussions, the commenter's abbreviation, as shown below, is used.

Abbreviations for Commenters

AAAE American Association of Airport Executives
 AACA Alaska Air Carriers Association
 ADF Airline Dispatchers Federation
 AIA Aerospace Industries Association
 ALPA Air Line Pilots Association
 APA Allied Pilots Association
 ASA Atlantic Southeast Airlines
 GAMA General Aviation Manufacturers Association
 HAI Helicopter Association International
 IAPA International Airline Passengers Association
 NACA National Air Carrier Association
 NATA National Air Transportation Association
 NTSB National Transportation Safety Board
 Penair Peninsula Airways
 RAA Regional Airlines Association

V. Major Issues

V.A. General Justification

In Notice 95-5, the FAA justified the proposed rule on the basis of the higher accident rate for commuter airlines. Parts of the proposed rule were also supported by the testimony from Congressional hearings on commuter airline safety regulations and by the NTSB study, based on accident investigations and previous studies, which found that part 135 regulations had not kept pace with changes in the industry.

Comments: The NTSB and the Air Line Pilots Association (ALPA) generally support the proposal and its justification. A comment from the International Airline Passengers Association (IAPA) supports the rulemaking justification by stating the findings of a recently completed IAPA study of commuter/regional airplane safety records in the United States covering the period 1970 through March 31, 1994. According to IAPA, during that period carriers using airplanes with 30 or fewer seats had 29 fatal accidents with 249 passenger fatalities; over 30 seat regional carriers had 1 fatal accident with 2 passenger fatalities; major airlines had 11 fatal domestic jet accidents with 527 passenger fatalities.

In contrast to these comments, many other commenters state that the proposed rulemaking lacked sufficient justification. Recent accident data, say these commenters, have shown significant reductions in accident rates for commuters so that the difference in accident rates for part 121 operations and part 135 commuter operations is minimal. According to at least one of these commenters, if the accidents that occurred in extreme environments such as Alaska are removed, the accident rate under the two parts would be either the same or lower for part 135 commuter operations.

proposed restrictions, certificate holders now operating airplanes with a seating capacity of 10 to 19 passenger seats will switch to reciprocating-powered airplanes with a passenger seating capacity of 9 or less in order to continue to operate under part 135. Furthermore, some commenters state that if fares are significantly increased to pay for the more restrictive requirements, passengers may choose ground transportation, which has a much higher accident rate.

Several commenters state that the proposed rule would have a significant economic impact on small airline operators, in some cases forcing them to close their businesses, thus eliminating air transportation to some locations. In addition, according to some commenters, the proposed rule would have a negative impact on competition, particularly in the foreign market because the cost of U.S. manufactured airplanes would increase.

FAA Response: The FAA does not agree with the assessment that the proposed rule lacked sufficient justification. The FAA recognizes the validity of some of these comments especially in regard to unintended safety decrements if the aircraft performance portions of the proposed rule were adopted on the schedule proposed. While the FAA recognizes the improvements in the accident data for commuter airlines in recent years, it intends through this rulemaking, and other related rulemaking actions underway, to reduce the accident rate even further.

Several commenters have questioned the need for a rule that would move affected commuters into part 121 domestic or flag operations. For instance two commenters argue that a dispatch system would not have prevented the three accidents cited by the FAA in the NPRM. It would be a mistake to assume that the FAA is basing this final rule on just those three accidents. Similarly, it would be a mistake to conclude that the FAA is justifying this rule on merely "perceptions" of a problem. Those accidents were catalysts for the Government to focus on the differences in the part 121 accident rate and the accident rate for 10- to 30-seat part 135 commuters. Over the next 15 years affected commuters are expected to have had 67 more accidents than they would have had if the accident rate for part 135 affected commuters were the same as that for part 121 scheduled operators. The FAA believes that adoption of this rule will significantly close the accident rate gap over time.

The FAA believes that the part 121 regulatory scheme for scheduled operations is more appropriate for the 10- to 30-seat scheduled operations. The added safety features and requirements in part 121 domestic/flag rules, including the dispatcher system, will increase safety for the affected commuters. Because most accidents are caused by human errors, rules such as the part 121 training rules and the dispatcher system rules are some of the most valuable tools in reducing the number of these kinds of accidents. Rules that most directly relate to preventing accidents caused by human errors are being imposed on the affected commuters on a faster schedule than many of the other rules (e.g., aircraft performance and certain equipment retrofits). It can be reasonably anticipated that applying part 121 operating rules, including these two groups of rules, can begin to immediately and significantly reduce the accident rate for affected commuters. For instance, the FAA anticipates that requiring operators to have someone (i.e., a certificated dispatcher) double check the work of the pilot and provide the flight crew with updates on weather and alternate airports can reduce some human factor errors. The FAA believes that if the flight crew is subjected to more stringent flight and duty safeguards (either the current part 121 domestic flight and duty rules or the rules in a soon to be issued NPRM in which the FAA will propose to overhaul all the flight and duty regulations), the dangers of fatigue causing a human factors error will be reduced. Enhanced part 121 training (which is being required of affected commuters in an associated final rule) will also reduce some human factor errors.

It is critically important to impose the bulk of the part 121 regulatory scheme on affected commuters because the absence of any significant portion of that regulatory scheme may lessen the effectiveness of the rest of the safety features in the part 121 regulatory scheme. Even the best trained and well rested pilot is a human being and, therefore, subject to making errors. With a dispatcher system, the chances of pilot miscalculations or oversights could be reduced. Moreover, a dispatcher can assist the flight crew in making enroute plans for an alternate airport (which might be necessary due to weather problems, air traffic control problems, airplane equipment problems, fuel problems, etc.) while the crew

the lack of continuing justification for these differences. As Notice 95-5 pointed out, the distinction between these two types of operations was, in the beginning, an obvious necessity. Major air carriers engaged in public transportation were entirely different from the small on-demand, air taxi operator. But with the development and growth of what has come to be known as commuter service, the line between the two has blurred. Certain segments of the commuter industry have continued to develop commuter category airplanes, holding the line at 19 passenger seats in order to stay within the limits of the less restrictive airworthiness regulations for nontransport category aircraft. This has created the potential for the further development of commuter airplanes specifically designed to stay within the limits of the less restrictive regulations while at the same time becoming as sophisticated or more sophisticated in technology than some transport category airplanes operated by the major carriers. With hindsight, the FAA may not have drawn the line as it currently is but would have attempted from the start to maintain one set of requirements.

Until now the line between the requirements has not created a safety concern, but as the commuter market grows, the disparity between the two sets of requirements is of more concern. There is no longer any justification for maintaining two sets of standards for scheduled operations in airplanes with a passenger-seating configuration of 10 or more seats. When a passenger pays for a ticket on an FAA certificated commuter operation, that passenger must be assured of the highest possible level of safety.

With respect to commenters concerns that the proposed rules will actually decrease safety because certificate holders will switch to reciprocating-powered airplanes, the FAA has modified the proposal, especially in regard to the schedule for some airplanes to meet part 121 airplane performance criteria, to allow operators sufficient time to build up capital or credit to make changes to the existing fleet or to purchase new airplanes that meet the higher performance standards. The FAA does not want to move so fast as to force operators to use airplanes that have even higher accident rates (i.e., airplanes with 9 or fewer seats).

The FAA finds that safety and the public interest require extending the proposed compliance dates for imposing part 121 performance criteria requirements and some equipment requirements until it is economically feasible for operators of 10- to 19-seat airplanes to acquire or lease replacement aircraft. The FAA has analyzed the situation and has concluded that many operators of 10-15 seat aircraft would replace those aircraft with 9 or fewer seat aircraft to avoid the sudden imposition of large costs on their current fleets. Without the FAA modifying its proposal with regard to airplane performance requirements, many airplanes would be eliminated from scheduled service at the first compliance date (i.e., 15 months after publication of the final rule) and operators of other airplanes would have to offload passenger seats, thereby causing the economic and safety impacts discussed previously. This modification would be consistent with the National Transportation Safety Board's (NTSB) recommendation for airplanes with 10- to 19-seats in scheduled service. For those aircraft, the NTSB recommended that scheduled passenger service be conducted in accordance with part 121 "... or its functional equivalent, wherever possible".

Clearly the NTSB used the phrase "wherever possible" because it knew that it was not possible for a substantial portion of the 10- to 19-seat airplane fleet to meet all of the requirements of part 121. The NTSB carefully chose its words when it made its recommendations for 10-19 seat airplanes used in scheduled service. The NTSB recognized that the FAA necessarily had to exercise judgment about which part 121 regulations to impose, which regulations could be modified to achieve functional equivalency, and which regulations simply might not be possible.

In regard to comments that higher fares resulting from this rulemaking will cause passengers to switch to less safe modes of transportation, it has been the FAA's observation that passengers are usually willing to pay for safety. While some may choose to drive rather than fly, that has not stopped the airlines in the past from raising fares. It should also be noted here that the public tolerates a higher accident rate for automobile travel than for airplane travel. If air transportation accident rates approached that of ground travel, most Americans would stop flying. The air transportation industry is very aware of this; it is the main reason that air transportation is safe. As one commenter points out, the recent

cannot be upgraded without significant cost.

Some may argue that there may still be limited circumstances, even with these changes, where the effects of this rule (and related rulemakings on upgraded training requirements and pilot flight time and duty limitations) will be so burdensome as to lead to adverse safety consequences and/or a loss of critical air service. This is neither FAA's intention nor its expectation. Indeed, the entire premise of this rulemaking is that safety standards can and must be improved for the benefit of passengers in 10-30 passenger seat aircraft in scheduled service.

Nevertheless, there is in place in 14 CFR 11.25 a process for requesting and granting exemptions from regulatory requirements, including those adopted here. As with any request for exemption, of course, an applicant would have to demonstrate that the public interest justifies such an exemption. In this case, an applicant could show, for example, that it is unable to comply with a particular provision or a particular schedule date due to circumstances beyond its reasonable control (rather than its own failure to act in a timely or prudent manner), that there is convincing evidence that alternative service is unavailable to the public, and that the carrier would be able to maintain an adequate level of safety during the period of the requested exemption.

We would expect that any exemption from this rule would be for a limited period only, such as the time required for delivery of a piece of equipment that has been ordered. Our goal would be to permit the air carrier to come into compliance with the rule in an orderly manner, and not simply to delay or avoid the cost of compliance.

The FAA considers this rulemaking a positive step towards promoting air transportation by renewing confidence in commuter operations. Most importantly, this rulemaking should reduce the accident rate of the affected commuters to a rate that is closer to that of current part 121 domestic operators.

This rulemaking is consistent with the FAA's obligation in accordance with section 44701(d) of Title 49 of the U.S. Code that when prescribing a regulation or standard to promote safety or to establish minimum safety standards, the Administrator shall consider the duty of an air carrier to provide service with the highest possible degree of safety in the public interest. The intent of this rulemaking is to provide the highest possible degree of safety to affected commuter operations.

V.B. Applicability

The FAA proposed that part 121 requirements would apply to all scheduled passenger-carrying operations for compensation or hire in airplanes with a passenger-seating configuration of 10 or more seats and to all scheduled passenger-carrying operations for compensation or hire in turbojet-powered airplanes regardless of seating capacity. (Throughout the rest of this document these certificate holders are referred to as the "affected certificate holders" or the "affected commuters.") Under the proposal, scheduled passenger-carrying operations in non-turbojet airplanes with 9 or fewer passenger seats, on-demand operations with airplanes with 30 or fewer passenger seats, operations in single-engine airplanes, and operations in rotorcraft would continue to be under part 135.

The proposed rule would also have eliminated the frequency of operations test of five round trips per week which allowed some part 135 scheduled operations to be conducted under the on-demand rules of part 135.

Comments: While no commenters specifically object to applying part 121 requirements to commuter operations in airplanes of 20 to 30 passenger seats, several commenters, many of them small part 135 certificate holders, object to applying part 121 requirements to commuter operations in airplanes of 10 to 19 passenger seats. According to these commenters, the FAA did not sufficiently justify imposing the more restrictive part 121 requirements on operations in these size airplanes and the small certificate holders of these airplanes would not be able to meet the economic burden of the proposal. A few certificate holders state that if the regulations are implemented as proposed they would either have to downgrade their airplanes, reduce the number of passenger seats, or terminate certain services. This is especially the case for small fixed-based certificate holders, who conduct mostly on-demand service with

leaving out the under 10-seat aircraft from the rulemaking, passengers would be exposed to travel on the least safe aircraft operating in scheduled passenger transportation. According to the commenter, most under 10-seat aircraft are piston-engined, with a lower level of engine reliability and performance. The aircraft are frequently operated in harsh environments thereby exposing passengers to higher risks.

Many of the commenters who object to the applicability of part 121 to aircraft with 10 to 19 passenger seats, also object to the definition of "scheduled" in proposed § 119.3. According to these commenters, the effect of the current description in SFAR 38-2 of commuter air carriers that includes 5 round trips per week should not be changed. Apparently some small certificate holders that conduct mostly on-demand service also provide one or two scheduled service flights per week. According to these commenters, if they have to upgrade the airplanes and operations to part 121 to conduct these scheduled flights, they will downgrade the airplanes or terminate the service. The commenters state that they cannot afford to comply with part 121, that the service they provide offers one-of-a-kind service to remote places or resorts, and that in some instances there is no ground transportation to these locations.

Several on-demand operators and the National Air Transportation Association (NATA) comment that the FAA should not revise part 135 on-demand requirements either at this time or at any time. These commenters are responding to a statement in Notice 95-5 that additional standards for on-demand air taxi operations may be considered in the future.

The General Aviation Manufacturers Association (GAMA) objects to including all scheduled passenger-carrying operations in turbojets under part 121 regardless of the number of passengers. While GAMA agrees with the FAA's assumption that no turbojets are being used in regularly scheduled part 135 operations, it objects to the applicability because the FAA presented no technical justification for the proposal. GAMA recommends allowing turbojets with a passenger-seating capacity of 9 or less to operate under part 135. Aerospace Industries Association (AIA) also objects that no rationale was presented for including turbojets. AIA states that the proposed rule offers an unfair competitive advantage for normal category turboprops against jets with a passenger-seating capacity of 9 or less. United West Airlines states that it is a small operation with two jets, that it costs \$70,000 a year to train its four pilots, and that the proposed rule will put the airline out of business.

Two individual commenters recommend that "any scheduled operation with airplanes seating more than 9 passengers but less than 19 passengers" be operated under supplemental rules when that scheduled operation is a code-sharing arrangement with another part 121 scheduled carrier.

FAA Response: The so-called "frequency of operation" provision in the SFAR 38-2 definition of commuter air carrier does not exist for current part 121 operations. Affected commuters being upgraded to part 121 by this rule will be required to conduct all of their scheduled operations under part 121 regardless of the number of scheduled operations. However, the FAA has decided to retain the frequency of operations distinction for those operations conducted in airplanes with a passenger-seating configuration of 9 seats or less by revising the definitions of "commuter operation" and "on demand operation" in § 119.3. Therefore, scheduled operations in airplanes with a passenger-seating configuration of 9 or less (except turbojets) and conducted on a particular route with a frequency of fewer than five round trips per week (regardless of whether one or more airplanes are used on the route) would be conducted under the requirements applicable to on-demand operations.

The FAA believes that, because of the nature of the operation in which small turbojets, which are type certificated under part 25, are used (e.g., transoceanic, long range, international, etc.), they approximate the operations of larger air carriers. For example, part 135 contains no requirements for long-range navigational equipment or long-range fuel considerations. In an effort to increase the safety for passengers carried in those kinds of operations, the FAA has determined that any scheduled operations of turbojet airplanes should be conducted under part 121.

The FAA disagrees with commenters who suggest that commuter operations in code-sharing arrangements should be conducted under the rules for supplemental operations. Code-sharing, although it may affect passengers' perceptions, is a business/marketing arrangement and is not the basis for an FAA

of Nevada and the vicinity of the Grand Canyon. Some of these commenters would be affected by the rulemaking because they operate nontransport category airplanes of 10 to 19 seats and because they provide point-to-point service; for example, from Las Vegas to Grand Canyon Airport even though the flights are exclusively marketed as sightseeing and not point-to-point travel. Despite the fact that they technically fall into the category of a commuter operator, these commenters claim that they are more like an on-demand operator and that the proposed rule would penalize them for using larger, safer airplanes than their competitors. One of these commenters states that it does not fly city to city, but flies regularly scheduled flights that take off and land at the same airport. This operator states that, because of the nature of the operation and because of the proposed definition changes, it would be required to comply as a scheduled operator.

According to the commenters, since they have upgraded from 6- to 9-seat airplanes to 19-seat airplanes, they have been required to install ground proximity warning systems (GPWS), traffic alert and collision avoidance systems (TCAS), cockpit voice recorders (CVR), and flight data recorders (FDR), while their competitors have not been burdened by these costs. According to some of these commenters, this equipment is not beneficial in their operating environment because they typically fly in VFR conditions on short-range flights of an hour or less.

The commenters complain that if the proposed rule is implemented, they will be forced to replace the turboprop airplanes with smaller reciprocating-powered planes and will thereby lose some significant safety benefits such as the following:

- The two-pilot crew requirement with captains required to hold an Air Transport Pilot rating.
- Aircraft certificated to higher levels of aircraft performance.
- Aircraft maintenance procedures under the more comprehensive Continuous Airworthiness Maintenance Program.
- Safety equipment such as GPWS, TCAS, CVR, and weather radar.

One commenter lists some of the more "onerous" proposed requirements:

- "Ditchable" exits in case of water landings.
- Emergency floor path exits.
- Third attitude indicator (in aircraft flown in daylight under visual flight rules).
- Portable protective breathing equipment (PBE).

A commenter points out that the new aircraft performance requirements would limit maximum operating weight at Grand Canyon due to the high altitude.

According to these commenters, switching to smaller airplanes will increase air traffic congestion in the Grand Canyon area, decrease safety for passengers, and double or triple noise levels.

According to one commenter, these certificate holders do not have code-sharing partners and while these certificate holders sometimes provide point-to-point service, the flights are typically part of an all-inclusive tour package which includes ground transfers to Las Vegas hotels, sightseeing flights to the Grand Canyon, and motor coach tours of the Grand Canyon. This is totally unlike typical commuter operations.

Another commenter, however, says that at least one of the air tour operators does use code-sharing with a major carrier and that the offering of its scheduled flights is available by referencing airline computers all over the world.

Some of the commenters cite an NTSB report ("Safety of the Air Tour Industry in the United States," June 1, 1995) which states that the implementation of SFAR 50-2 has created a safe operating environment for air tour operators over the Grand Canyon. One commenter quotes NTSB as saying,

The Grand Canyon Air Tour Council states that the proposed expanded definition of "scheduled operations" is the problem and that the definition was changed with no satisfactory explanation or justification.

The Office of the Lieutenant Governor of Nevada testified at the public meeting held in Las Vegas that compliance would affect a "\$250 million industry that we have worked hard to develop."

FAA Response: The FAA does not agree that air tour operations are totally unlike commuter operations. Much of an air tour flight is like much of a commuter flight. If an air tour operator is conducting scheduled operations, as defined in § 119.3, in airplanes with a passenger-seating configuration of 10 or more, it must comply with part 121 domestic or flag requirements, as applicable. This includes operators who fly from and return to the same point on a scheduled basis.

The FAA agrees that certain aspects of air tour operations make them appear to be unlike commuter operations. For example, portions of air tour flights are at lower altitudes, typically over rugged and remote terrain, and often in airspace that is congested with other sightseeing aircraft. The FAA has begun an air tour industry project to study the implications of these differences to safety and to develop regulations, as necessary, to address specific features of air tour operations. If regulations are implemented as a result of the project, they would be in addition to current regulations, as is SFAR 50-2 which prescribes requirements for special conditions relating to flights over the Grand Canyon. The FAA project will consider the recent NTSB study cited by commenters. Because certain part 121 and 135 provisions are being recodified into part 119, SFAR 50-2 and SFAR 71 are being updated to conform to this rulemaking.

Alaskan Comments: Several comments were received from certificate holders in Alaska, Alaska government agencies, and others interested in how the proposal will affect Alaskan operations. Currently Alaskan certificate holders conducting scheduled operations in airplanes of 10 to 30 seats comply with part 135. The regulations allow them not to comply with flight time limitations for scheduled operations (§ 135.261(b) and (c)) and instead allow them to follow the regulations for on-demand operations. Alaskan certificate holders using airplanes of more than 30 seats must comply with part 121 supplemental requirements for nonscheduled flights and flag requirements for international and intra-Alaska scheduled operations. Notice No. 95-5 proposed no exceptions for Alaska. Certificate holders whose operations fit the applicability for scheduled operations for airplanes of 10 or more seats would be required to comply with part 121 domestic requirements. International operations would follow flag requirements of part 121 and charter operations would follow supplemental requirements of part 121. Alaskan operators currently operating under part 121 flag rules would have to operate under part 121 domestic rules except for those operations that meet the definition of flag operations in proposed § 119.3.

The basic thrust of the comments is that the Alaska environment is unique and that requiring Alaskan commuter operators to comply with part 121 requirements would be devastating to certain certificate holders in Alaska and therefore to certain segments of air transportation. Furthermore commenters point out that most air transportation in Alaska is conducted in small reciprocating-powered airplanes with passenger-seating capacities of under 10 seats. Therefore, the proposed rule would not have a significant effect on air transportation safety in Alaska and would impose an economic burden on a few certificate holders who provide upgraded, i.e., safer, service. According to commenters, the accident rate for airplanes with under 10 seats is much higher than for turbine-powered airplanes with 19 seats. (Accident data analyzed by the FAA verifies that, unlike the rest of the nation, the part of the commuter fleet in Alaska involved in accidents contains a large proportion of under-10-seat aircraft.)

Peninsula Airways (Penair), as well as other commenters, states that characteristics of Alaska make commuter operations in the State unlike those in other parts of the country. In particular flights are conducted in the same time zone, pilots do not have long commutes to their jobs, flights are not usually conducted between 9 p.m. and 7 a.m., and operations subject to Air Traffic Control (ATC) are not in congested airspace. This rationale is primarily in defense of using the flight time limit requirements of part 135 nonscheduled operations.

of the 10- to 19-seat airplane and would increase fares by 67 to 100 percent. The proposed airport legislation is expected to cost the state \$100 million. AACA states that the proposed rule would directly affect only 15 certificate holders in Alaska. Two-thirds of the scheduled air carriers use aircraft with a seating capacity of 10 seats or less.

ERA Aviation, which currently operates under part 121 flag rules, objects to the proposal to operate as domestic/supplemental. It operates over 100 aircraft, fixed and rotary wing, nationally and internationally. The commenter states that for years Alaska part 121 operators have been operating under flag rules, both for scheduled and nonscheduled operations. This has allowed increased flexibility in crew scheduling, which is necessary because of the length of Alaska routes, the lack of facilities in remote locations, and the lack of road networks or other alternate forms of transportation to outlying communities. Section 119.21 would require these carriers to operate under domestic rules, which would decrease crew scheduling flexibility, add substantially to costs, derogate safety, and probably result in the elimination of vital air transportation services to some outlying communities. The commenter says there is no safety justification for such a change because Alaska part 121 operators have established an excellent safety record under existing rules. They say that, at the very least, Alaska carriers currently operating under flag rules should be allowed to continue to operate under flag rules for both scheduled and nonscheduled operations.

A part of the proposal that would have affected several Alaskan certificate holders is the proposal that single-engine airplanes with 10 passenger seats now operating scheduled flights under part 135 would in effect have to remove a seat in order to continue operating in scheduled service under part 135. Single-engine airplanes are ineligible for operation under part 121. The only 10-seat single-engine airplane model involved is the single-engine de Havilland DHC-3 Otter (not to be confused with the twin-engine de Havilland DHC-6 Twin Otter mentioned elsewhere in this notice). According to AACA and other commenters, there is no possible safety benefit in taking a seat out of an airplane, but the cost to certificate holders who want to continue to use these airplanes in scheduled operations will be significant.

NATA comments that no accident involving the Otter would have been prevented by limiting the seating to 9 passengers. Furthermore, according to the commenter, the FAA cost on this issue is another example of gross underestimation; actual costs will be 15 times higher (almost \$22,000 per aircraft). The City and Bureau of Juneau opposes the proposal to remove a seat from the 10-seat airplanes so that they can operate under part 135. This commenter notes that there will be additional flights, additional noise, and additional congestion on the water and in the air. It notes that it is incomprehensible how the reduction of one seat from the Otter will provide an additional level of safety. Wings of Alaska comments that the most cost-efficient floatplane used in southeast Alaska is the single-engine DHC-3 Otter. Because there is no cost-effective replacement aircraft available for float operations that offers the same capacity as the Otter, replacing them is not an option. Wings states that it operates the Otter about 6 months a year. Four communities that do not have runways receive daily service. Wings purchased five 10-seat Otters in '92-'93 to improve service to a wilderness sports facility, substantially reducing noise by reducing the number of flights by 50%. Wings notes that considering initial operating experience (IOE) and route check requirements, it is being operated at a higher level of safety than the 10 seat, on-demand aircraft allowed under the rule to be operated in part 135. Wings estimates that the removal of one seat would have cost them \$85,000 in 1994. Wings asks that the Cessna Caravan and the Cessna Grand Caravan also be allowed to operate with 10 seats. AACA comments that Ketchikan Air Service, Taquan Air Service, and Wings of Alaska together operate 12 Otters in southeastern Alaska.

The NTSB comments that it intentionally excluded airlines that operate exclusively in Alaska from its study of commuter airline safety because of the unique characteristics of the environment in Alaska. The NTSB currently is conducting a study of commercial Alaska aviation including commuter airlines. The NTSB held two public meetings in Alaska during June 1995 and visited a number of scheduled and nonscheduled part 135 certificate holders to collect information for the study. The NTSB intends to compare flying operations in Alaska with the rest of the U.S. The study is scheduled for completion in 1995. Several other commenters mention the study and suggest that the FAA should wait until the study is completed before making any changes to Alaskan regulations.

with the particular demands of Alaskan operations. Penair states that 10 percent of its pilots are age 60 or over and that 20 percent are over age 52.

Commenters who oppose the rule suggest either exempting Alaska altogether, not including the 10-to-19 seat airplanes in the rule, or allowing under-19-seat airplanes to be covered under the supplemental rules of part 121 rather than the domestic rules.

FAA Response: The FAA agrees with the commenters who state that safety issues are the same in or out of Alaska. The FAA has specifically considered the implications of the proposal on Alaska given its unique characteristics and has determined that the rules should apply to Alaska as proposed. While the NTSB comment on Notice 95-5 states that the NTSB excluded Alaska from its safety study on commuter airline safety, the NTSB states in the report that its findings from the information obtained in the course of the study "apply to operations in Alaska as well as the other 49 states and U.S. Territories." ("Commuter Airline Safety," NTSB/SS-94/02). Therefore, this final rule does not provide a blanket exemption for Alaska.

In response to the single-engine airplane issue, the FAA has decided to allow an exception to continue. Currently, several part 135 certificate holders conduct scheduled passenger-carrying operations in single-engine airplanes type certificated with two pilot seats in the "cockpit" and 9 passenger seats in the "cabin." Some certificate holders are authorized to conduct scheduled operations in that airplane, the DHC-3 Otter, under daytime VFR, and carry a tenth passenger in the right-hand pilot seat. In Notice 95-5, the FAA proposed to limit all scheduled operations of single-engine airplanes to the carriage of nine passengers, under all conditions. (60 FR 16235, 16273) The FAA has decided to allow the current practice to continue for operators who currently conduct single-engine operations under daytime VFR with a tenth passenger.

Comments on Exemptions/Deviations/Waivers: Currently some certificate holders operating under part 135 that will be affected by this rulemaking have obtained exemptions, deviations, and waivers from certain part 135 requirements.

AACA states that AACA has held an exemption on behalf of its members allowing removal and installation of aircraft seats by certain pilots and trained ground personnel under an FAA-approved program. The commenter states that it is unclear whether or not aircraft operated previously under part 135 in Alaska would be allowed to continue this seat removal and installation under part 121 with an appropriate exemption. AACA states that taking away this option would significantly increase air carriers' costs and diminish their flexibility to utilize aircraft in "combi" (combination cargo/passenger) configurations. AACA recommends that all exemptions, deviations, or waivers held by a part 135 operator automatically be carried over into its part 121 operation. As presently written, Notice 95-5 would require compliance with part 121 first, and only then would the FAA evaluate requests for exemptions to part 121 rules. This places additional and unwarranted operational costs on air carriers transitioning to part 121.

FAA Response: The specific exemption referred to by the AACA applies only to operations with airplanes with a passenger-seating configuration of 9 or less, and therefore is not affected by this rulemaking.

However, exemptions issued for operations under part 135 do not automatically continue in effect for operations under part 121. Therefore, affected commuters who will in the future be operating under part 121 must reapply for any exemptions they believe should apply to their part 121 operations after the compliance date of this rule. Also, general exemptions issued to present part 121 operators will not apply automatically to new part 121 operators so any new part 121 operator will have to apply to be included in these existing exemptions.

V.C. Aircraft Certification

The proposed rule would amend part 121 to require each 10- to 19-passenger seat airplane that is to be operated in scheduled operations and for which an application for type certification is made

or manufactured in the future under an already existing part 23 commuter category type certificate would have to comply by specified compliance dates with certain performance and equipment requirements in part 121. These performance and equipment requirements are discussed later in this preamble.

In Notice 95-5 the FAA included a table that set out a list of potential modifications that were being considered for application to airplanes having a passenger-seating configuration of 10-19 seats that were type certificated in the commuter category (or a predecessor) if the airplanes are to be used in scheduled operations under part 121. The table included a column that indicated that for 12 of the 38 issues addressed, the FAA had determined that any required upgrade should apply only to airplanes manufactured under a type certificate for which application is made after March 24, 1995. Since these 12 issues will be the subject of a future NPRM, the FAA is not addressing specific comments on the substance or cost of these issues in this document.

Comments: ALPA fully supports the proposal to require newly-designed airplanes to comply with the standards of part 25 and also supports continued use of commuter category airplanes. The commenter does not, however, concur that airplanes type certificated under part 23 normal category (i.e., pre-commuter category) should be permitted to remain in operation with more than 10 passenger seats, even in non-air carrier service. ALPA appears to base its position on differences in performance requirements between commuter category and the predecessor normal category standards.

American Eagle supports the proposed rulemaking and states that, "while there may be limited circumstances when aircraft design and/or manufacture may preclude or delay compliance with FAR part 121 or FAR part 25, cost and weight considerations should not be an acceptable barrier to the increase in safety which is derived from applying the higher standards of aircraft airworthiness, airline operations and passenger safety which those regulations provide."

In contrast, six other commenters do not believe that any propeller-driven airplanes with 10 to 19 passenger seats should be required to meet the transport category standards of part 25. Although the commenters' reasons vary, the comments focus on three basic issues: (1) Commuter category standards are appropriate for airplanes of this class; (2) there is no evidence that safety would be enhanced by requiring future airplanes to comply with part 25; and (3) the cost of complying with part 25 would be prohibitive.

Similar comments concerning recertification of existing part 23 airplanes under part 25 were also offered, apparently under the misunderstanding that airplanes already type certificated, or derivatives of those airplanes, would have to be recertificated under part 25.

Some commenters believe that the airplane certification issue is of such magnitude that it should be held in abeyance for a separate future rulemaking program. In this regard, the commenters assert that extensive changes to part 25 would be needed to accommodate the airplanes otherwise certifiable under part 23 commuter category and that those changes would entail a considerable expenditure of FAA resources. They further believe that any such changes should be subject to harmonization with corresponding standards of the European Joint Aviation Requirements (JAR).

Several commenters cite the FAA's 1977 proposal to require all airplanes used in air carrier service to meet part 25 transport category standards. That proposal was later withdrawn. According to commenters, the part 23 standards of that era were considerably different from those of today's part 23 commuter category. The level of safety expected by the public today is much greater than that tolerated in 1977.

A number of other commenters address the proposed retrofitting of existing part 23 normal and commuter category airplanes to meet certain part 25 standards. Those comments are addressed in the section-by-section portion of this preamble (section VI).

One commenter has developed and produces a unique propulsion system in which two turbine engines drive a single propeller through a common gearbox. In addition to the installations already being made in existing airplanes, the commenter anticipates a future installation of this system in an airplane of

a financial position to quickly obtain new airplanes and currently there are not enough replacement airplanes available that meet the higher standards. The result could be a shift from 10- to 19-seat turbopropeller airplanes to 9-seat or less reciprocating engine airplanes, which have an even higher accident rate.

The six commenters' assertions that commuter category standards of part 23 are appropriate for airplanes of this class and that there is no evidence that safety would be enhanced by type certification under part 25 are, to a certain extent, correct. Through a number of recent amendments and pending amendments, the level of safety established by the commuter category has been and is being enhanced considerably. In many instances, commuter category airplanes must meet standards that are the same as, or very similar to, those of part 25 transport category. Requiring future 10- to 19- passenger seat airplanes to be type certificated under part 25 would complete this effort to ensure that these airplanes used in air carrier service meet the same aircraft certification standards as the larger airplanes.

In response to comments that part 23 airplanes could not be type certificated using part 25 standards, the FAA notes that it did not propose in Notice No. 95-5 that part 23 normal or commuter category airplanes presently in operation would have to comply with part 25 standards for type certification. Instead, it proposed that part 23 airplanes that will be required to be operated under part 121 will have to comply with certain part 121 equipment and performance requirements.

In response to the individual comment on a unique propulsion system, although the commenter's request is beyond the scope of this rulemaking, it will be considered during the review of part 25 discussed above.

V.D. Flight Time Limits and Rest Requirements

The FAA proposed that the part 121 domestic flight time limits and rest requirements would apply to affected commuter operators when conducting operations within the United States. Under the proposal affected commuter operators, when conducting operations to or from the United States, would comply with the flag flight time limitations and rest requirements of subpart R. Additionally, if these certificate holders use these same airplanes for nonscheduled operations, those certificate holders would be required to comply with supplemental flight time limitations and rest requirements of subpart S of part 121.

As stated in Notice 95-5, since the flight time limitations and rest requirements for flag and supplemental operations were not updated in 1985 when domestic limits were, the FAA has developed an NPRM that is being issued concurrently with this final rule. (See elsewhere in this issue of the *Federal Register*.)

Comments: Atlantic Southeast Airlines (ASA), Regional Airlines Association (RAA), and Big Sky Airlines comment that the FAA should provide specific and scientifically-based data to support this significant change. Fairchild Aircraft adds that the additional time off duty provided by the proposal will not necessarily be used for rest. NATA comments that there are differences in part 135 operations that justify a different set of flight time limitations and rest requirements: part 135 operations are generally confined to a particular area, pilots of smaller certificate holders rarely commute a long distance to and from work, and pilots have fewer overnight stays as part of their schedules. Air Vegas comments that unless an exception is provided, seasonal operators would have to hire additional crews in order not to exceed the 7-day limit of 30 hours or the monthly limit of 120 hours. This commenter notes that short-term employment of such pilots is next to impossible. Morton Beyer and Associates comments that the cost of hiring additional pilots is expected to add another \$250 million to airline costs. Twin Otter International comments that the 1,200 yearly limit in part 135 is based on the part 121 100-hour-per-month concept, and that the regulations really are similar.

Several individuals strongly urge the FAA to adopt the part 121 standards for the upgrading commuter pilots. American Eagle comments that it applies part 121 domestic rules to its part 135 operations and believes that all air carriers providing commercial passenger service should use either the domestic or flag rules of part 121.

ALPA comments that while the upgrade to part 121 will result in an improvement in flight time limits and rest requirements, part 121 will continue to be deficient in this area until additional rulemaking action is taken, as promised by the FAA.

Alaska commenters argue for maintaining the current regulations. ERA Aviation estimates that if the proposed rule is adopted, it would necessitate at least a 15% increase in the number of pilots it would need, resulting in a \$500,000+ increase in costs. Penair finds four reasons for excepting Alaska: Operations are conducted in the same time zone, few Alaska pilots commute to their jobs, less than 5% of Alaska operations occur between 9:00 p.m. and 7:00 a.m., and Alaska does not have the congested ATC operations which are found in the lower 48 states. AACA also presents this argument, adding that going from 1,400 hours of duty per year down to 1,000 represents a 29% decrease in productivity. Other Alaska certificate holders, e.g., Wings, Northern Air Cargo, Taquan Air Service, Tanana, endorse the AACA comment.

One individual commenter from Alaska opposes any attempt to create exceptions to the requirements for Alaska. This person supports the assertion that Alaskan operations are basically the same as state-side operations and should be afforded no special exemptions.

This individual, a pilot who flew over 1,300 hours last year, states that there were many consecutively scheduled 14-hour duty days and many canceled days off. Ten hours of rest may sound adequate, but not for days on end. The individual questions the logic that one is more rested in one geographic area than in another. According to the commenter, duty cycles that are unsafe in the lower 48, are also unsafe in Alaska.

Another individual from Alaska states that the FAA has shown no data to indicate any problem with the provisions of § 135.261(b), which allows Alaskan scheduled operators to use § 135.267. The individual states that in 1994, he flew 1320 hours, had 173 days off, slept in his own bed every night, and never had less than 10 continuous hours of rest in any 24-hour period. He believes he probably had more rest and time off than the average long-haul part 121 pilot. The commenter states that the proposed flight/duty time limits would cause scheduling nightmares for operations in rural/remote parts of Alaska.

FAA Response: The FAA is holding in abeyance a final decision on the proposed imposition of current part 121 flight time limitations and rest requirements on affected commuters pending a review and disposition of comments on the separate flight and duty rulemaking in which the FAA proposes to overhaul all the flight and duty rules. The separate rulemaking, if adopted, would harmonize flight and rest requirements for all part 121 and part 135 carriers. The FAA anticipates that the separate rulemaking will result in a net cost savings to the industry as a whole. In the meantime, affected commuters will continue to operate under the current part 135 flight and duty rules. This will prevent needless expenditure of resources by affected commuters who would have to implement flight and rest provisions under the commuter rule proposal and then later might have to change their system to comply with the separate rulemaking. For the same reasons the FAA will allow part 121 certificate holders operating in Alaska and Hawaii to continue to follow the flight and duty rules of part 121 applicable to flag operations, even though under this rulemaking these certificate holders are now classified as conducting domestic operations.

Accordingly, §§ 121.470, 121.480, and 121.500 include an exception for affected commuters allowing that they continue to comply with flight time limits and rest requirements of part 135. Additionally, § 121.470 will allow existing Alaska and Hawaii intrastate scheduled domestic operations to continue to be conducted under flag rules.

V.E. Age 60 Rule

Section 121.383(c) prohibits a certificate holder from using the services of any person as a pilot, and prohibits any person from serving as a pilot, on an airplane engaged in operations under part 121

rule to commuter pilots.

Several commenters, however, state that if commuter pilots are subjected to an age limit, the FAA should adopt a phased-in implementation schedule to avoid abruptly ending the careers of pilots who had not planned on retiring at age 60. Another commenter states that it hires over-age-60 retired part 121 pilots.

FAA Response: As discussed above, the FAA has identified a strong need to enhance the safety of commuter operations. Commuter airlines are carrying an increasing number of passengers over an increasing number of miles. While safety has improved over the past two decades, commuter airlines operating under part 135 continue to have a higher accident rate than domestic part 121 airlines. The FAA can no longer justify most distinctions between parts 121 and 135 commuter operations.

The part 121 regulatory scheme provides a network of safety features. Because most accidents are caused by human error, rules designed to enhance the performance of pilots are among the most valuable in reducing the number of accidents. Elsewhere in this preamble the FAA discusses other provisions that serve this purpose, such as the critical role of the aircraft dispatch system in double checking the work of the pilot and providing updates on weather and alternate airports. The training requirements for commuter pilots are being upgraded, and eventually part 121 flight and duty time rules or the newly proposed rules will apply to them. The Age 60 Rule provides an additional measure of safety by reducing the risk that age-related degradation will affect pilot performance. A pilot may have the best training in the world, and be well-supported by an aircraft dispatch system, but if the pilot suffers from a subtle age-related degradation in performance, safety will be reduced. Also, the potential safety benefits of training and dispatching may be reduced by human safety lapses that could occur or do occur more frequently with age.

The "Age 60 Rule" was adopted by the FAA in 1959 (24 FR 9767, December 5, 1959). At the time Notice 95-5 was issued, the FAA was also considering whether, in the interest of safety, the Age 60 Rule should be retained as is or revised to allow pilots to continue to fly in part 121 operations past their 60th birthday. The FAA completed its review of the Age 60 Rule. In a Disposition of Comments (Disposition) published in the *Federal Register*, [cite], the FAA announced that it will not propose to change the Age 60 Rule at this time. The Disposition thoroughly discusses the various issues regarding the need for an age limitation and what that age should be, including the issues raised in the comments to Notice 95-5 that concern the Age 60 Rule in general, and those comments will not be further discussed here. This rulemaking deals only with the application of part 121 rules to affected commuter operations.

In Notice 95-5 the FAA proposed a general compliance date (that is, a date on which most provisions must be complied with) of 1 year after publication. The Notice also proposed delayed compliance dates for several of the requirements (other than the age limitation), to provide time for the work necessary to comply with the proposed requirements. In this final rule, the FAA has adopted a general compliance date of 15 months after the date of publication of this final rule in § 121.2(c), and also has adopted delayed compliance dates for a number of requirements, giving the air carriers 2, 4, or more years to comply with certain of the new requirements.

In response to the comments requesting delayed compliance dates, and after further evaluation, the FAA has considered that there are factors warranting delay in the compliance date for the Age 60 Rule, as it applies to those affected commuters that now will be brought under part 121. The lack of an age limitation in part 135 has created reasonable expectations on the part of both the affected commuter operators and pilots regarding the length of time that the pilots would continue in service: Some of those operators have spent money to hire and train pilots with the expectation that they would serve past the age of 60; and the pilots have not had to plan on leaving their positions at age 60. In fact, certain affected commuters appear to have a practice of hiring retired part 121 pilots, and will no longer be able to do so.

date, the affected commuters will no longer be able to hire pilots who have reached their 60th birthday (except for pilots who as of that date were employed as pilots for another affected commuter). However, pilots who are employed by affected commuters on that date will be able to continue to serve until December 20, 1999, after which the Age 60 Rule will apply to every pilot under part 121.

The delay in applying the rule will provide some relief from the difficulties discussed above. The 4-year compliance period for these pilots will permit the affected commuters to recover services for several more years from those pilots in which they recently have invested in training. Delaying the application of the rule to new hires until the general compliance date will give affected commuters time to adopt new hiring practices, at a time when the operators will have many other new requirements under this rule to comply with. The 4-year compliance period for pilots will give them time to plan for retirement or for changing jobs. It will also give affected commuters additional time to make careful selections of well-qualified pilots and train them under the new training requirements. And, the operators will not have to replace all of their over-age-60 pilots at once, at a time when so many other new requirements must be complied with.

V.F. Dispatch System

Parts 121 and 135 require certificate holders to exercise operational control over all flights conducted by the certificate holder. "Operational control" is defined in 14 CFR part 1 as "The exercise of authority over initiating, conducting and terminating a flight." Operational control consists of making decisions and performing activities on an ongoing basis that are necessary to operate specific flights safely. These activities include among other things crew and airplane scheduling, reviewing weather and NOTAM's (Notices to Airmen), and flight planning.

Parts 121 and 135 provide for three general types of operational control systems based on the kinds of operations and the complexity of operations: aircraft dispatch, flight following, and flight locating systems. Part 121 domestic and flag operations require a dispatch system, part 121 supplemental requires a flight following system, and part 135 requires a flight locating system for any flight for which a flight plan is not filed. In Notice 95-5, the FAA proposed that the affected commuters would be required to have a dispatch system. Affected commuters would have to meet all part 121 dispatch requirements, including dispatcher qualification requirements, recordkeeping, and flight release requirements. As proposed, affected commuters that would conduct some nonscheduled flights under part 121 supplemental rules could use a flight following method for the nonscheduled flights.

The FAA also stated in Notice 95-5 that Alaskan operations pose certain unique problems and requested comments on alternatives that could be considered for Alaska.

Comments: Two individuals suggest that the use of a dispatcher and dispatch system be an option for 10- to 19-seat certificate holders, recommending compliance with existing subpart F of part 121. Both commenters believe that the FAA should seriously consider permitting, at least on an interim 36-month basis, compliance with subpart F flight following requirements in lieu of subpart E dispatch requirements for transition carriers. This will, in their opinions, gain the early momentum of the industry by making it possible for many certificate holders to transition early. A long lead time is necessary to qualify existing personnel as dispatchers under existing part 65. The commenters remind the agency that during the early 1980's, by the FAA's own rules, 20- to 30-seat aircraft were subject to part 121 supplemental rules, including the flight following requirements of subpart F. One of these individuals also states that interim compliance with subpart F flight following requirements would ease the transition to subpart E dispatch requirements for affected certificate holders.

NATA comments that the FAA lacks understanding on the types of operations 10- to 19-seat certificate holders typically fly and recommends a flight following system instead of a dispatch system. NATA states that many small, independent carriers operating aircraft with 10 to 19 seats may have only 2 to 4 of these types of airplanes and may operate them over only a few selected routes. According to NATA, many of these carriers conduct on-demand operations in addition to their scheduled activity.

not be thoroughly performed. According to the commenter, the majority of commuter pilots are, as a rule, very young and inexperienced. These crews must continually perform at peak levels of performance both on the ground and in the air.

According to this commenter, as well as others, the use of the flight dispatcher would increase safety, operational efficiency, and productivity. The duties of filing the flight plans, checking NOTAMs, planning fuel requirements dictated by weather, and obtaining ATC routing would be completed by the dispatcher prior to the crew arriving for the flight. Optimum routes based on known ATC or weather delays would be filed, resulting in substantial fuel savings and improved arrival and departure reliability. The pilots would now be able to concentrate on flying and be able to relax and rest between flights. Flight could be more effectively managed, thus saving fuel, maximizing aircraft utilization, and passenger satisfaction.

On the other hand, according to the commenter, mandating the dispatch system for part 135 air carriers may create some heavy financial burdens. It will require a facility, communications hardware for the facility and the aircraft, trained personnel, and training for dispatchers. The initial capital outlay would not be recovered for several years. According to the commenter, this mandate will place severe constraints on many less established carriers and may actually result in bankruptcy for some.

Many commenters are in favor of the role of the aircraft dispatcher in operational control issues. One commenter states that the requirement for a formal dispatch system is long overdue.

One commenter believes that dispatch centers might create a sense of complacency on the part of the flightcrew and, along with other commenters, thinks that automated flight planning and flight following information should be used in lieu of dispatchers and dispatch centers. Two of the commenters advocating automated flight following systems state that the three accidents cited by the FAA in Notice 95-5 would not have been prevented by the use of a dispatcher. One commenter states that in his experience PIC's typically check dispatcher computations but do not duplicate the computations as the FAA stated in Notice 95-5.

The NTSB states that in its 1994 study report, it examined the differences in flight dispatch requirements between parts 121 and 135. The NTSB found that, in the absence of support from licensed dispatch personnel, pressures on commuter airline pilots to accomplish several tasks between flights in shorter periods of time might increase the risk of critical mistakes that could jeopardize the safety of flight. As a result, the NTSB recommended that the FAA require each principal operations inspector (POI) to periodically review air carrier flight operations policies and practices concerning pilot tasks performed between flights. This review was to ensure that carriers provide pilots with adequate resources (such as time and personnel) to accomplish those tasks. According to NTSB, the proposed rulemaking, if implemented, would meet the intent of the safety recommendation (A-94-193).

ASA, RAA, and Gulfstream International Airlines support many of the elements of the dispatcher rule. They state that flight dispatch systems that are required under part 121 are extensive since they address the dispatch and en route communications needs for a span of air carriers from international airlines with worldwide flight operations to the largest U.S. regional carriers. ASA supports the requirement for licensed dispatchers, believing that the most qualified candidates for licensing as dispatchers are the individuals currently employed as flight followers. These commenters request that the criteria in § 65.57 be examined to provide guidance for granting a dispatcher certificate based on practical experience as a flight follower under part 135 operations. According to the commenters, many flight followers have passed the written portion of the dispatch license but have not attended formal dispatch school and do not hold licenses. However, they may have extensive practical experience in scheduled air carrier operations performing what is essentially a dispatcher function. According to these commenters, the criteria contained in § 65.57 includes experience in scheduled military operations. The commenters believe that if military experience is applicable, the experience of a flight follower with a scheduled airline should qualify. These commenters also point out that the practical portion of the dispatcher license is administered using a Boeing 727 aircraft. The commenters believe that while many of the functions and decision

and forecasts necessary for operations. Section 135.213 allows the pilot in command to use various other sources, including his own weather assessment, for VFR operations. Of the four airports Samoa serves, only one (departure airport) is in controlled airspace with weather reporting facilities and instrument approach procedures. Enroute and terminal weather conditions are received through the ATC tower from their weather station. VHF communications with the tower cover almost the entire route, so the aircraft has ready access to any weather information available and direct information on the status of communications, navigation, and airport facilities. A dispatcher would not enhance safety but would add significant cost. If Samoa is required to provide weather conditions at each airport to the pilot from an approved source and the pilot can not assess the weather himself, the rule change could eliminate all of Samoa's present operations.

Similarly, Inter Island and Air Vegas comment that the requirement for enroute weather reporting is unfeasible because of minimal weather reporting facilities in the certificate holders' regions. Air Vegas also comments that radio communication in mountainous terrain would be difficult if not impossible with VHF radio systems because mountains block radio transmission.

Air Vegas comments that all "dispatcher duties" are currently being accomplished by personnel in the operations department, station managers, and company pilots. All flight following is being done by telephone. The commenter states that current flight following procedures meet part 135 requirements and are operationally safe and efficient.

Mesa Airlines comments that due to its short flight segments and the lack of significant weather changes in the areas in which it operates, a dispatch system is not needed. Mesa believes that all enroute communications can be accomplished by ATC.

AACA states that the requirements of subpart E come at a time when the availability of weather information in Alaska has been identified as a significant issue adversely affecting aviation activities (proceedings of an NTSB "Aviation Safety in Alaska" forum, May 1995).

The Airline Dispatchers Federation supports the dispatch proposal and agrees with the upgrading of current commuter facilities to dispatch centers. It believes this upgrading is necessary because of the extensive use of code-sharing by the aviation industry. The commenter is not in favor of amending part 121 dispatch rules for certificate holders of the 10- to 19-seat category. The commenter provides its estimate of costs to certificate holders that could be affected by the implementation of this rule. The commenter notes that the costs provided by some certificate holders may not be accurate. For example, cost estimates concerning flight planning and performance issues are inaccurate since several airlines use bulk stored flight plans and performance information taken directly from aircraft flight manuals for fuel planning. The commenter also provides its assessment of various aircraft accidents for which it believes dispatchers could have made a difference in changing events that led to the accident (crew fatigue, lack of management oversight, operational control issues, late arriving weather information).

ALPA comments that dispatchers should be required to complete their 5-hour inflight operating experience in 10- to 30-seat aircraft, not in larger 60-seat aircraft, as currently allowed. ALPA proposes that § 121.400(b) be amended by adding a group specific to propeller-driven aircraft with a seating capacity between 10-30 seats.

AACA comments that due to the operating environment of Alaska, the pilot and not the dispatcher is in a better position to access and evaluate operational control information. The commenter believes that scheduled operations in Alaska more closely resemble the operations conducted under supplemental rules and not domestic or flag operations. The commenter notes that pilots frequently are not in radio communication with company offices directly, but could communicate via Flight Service Station, ATC, or other aircraft. According to the commenter, enroute and destination weather conditions are either not accessible or not available at any time from "official" sources. The commenter notes that three affected certificate holders in Alaska presently have a part 121 type dispatch system in place. AACA further states that the assumption that estimated fuel savings by dispatchers would offset the cost of establishing

could be reduced. Moreover, a dispatcher can assist the flightcrew in making plans for an alternate airport (which might be necessary due to weather problems, air traffic control problems, airplane equipment problems, fuel problems, etc. . . .) during the flight while the crew focuses on flying the airplane.

The FAA disagrees with the recommendation to make the use of a dispatcher and dispatch system optional since that would not address the safety issues involved. The FAA also disagrees that a flight following system is an acceptable alternative to a dispatch system or that dispatch systems are not needed for limited flight distances if there is adequate weather reporting facilities. The use of a dispatch system is based on the type of operation (scheduled), and not the distance of a flight, the number of aircraft, or the type of aircraft being flown. Flight following systems are used for nonscheduled operations, and could be used for nonscheduled operations by affected commuters under the supplemental rules of part 121. NOTE: The dispatch system requirements apply only to scheduled passenger-carrying operations.

The FAA disagrees with the basic idea that the decision making process of operational control of aircraft can be made by automated means. While automation has improved the accuracy and timeliness of flight planning, weather information, and NOTAMs, nothing so far has replaced the decision making capabilities of a certificated dispatcher. Dispatchers receive training in subject matter beyond just flight planning, e.g. crew resource management, hazardous materials regulations. These subjects are just a small representation of the subject matter an aircraft dispatcher must know in order to make operational control decisions.

The FAA agrees with the comment that dispatchers are usually in a better position to review weather reports and forecasts than pilots hurrying to accomplish other postflight/preflight aircraft duties. Operational control issues are enhanced when both the pilot in command and the aircraft dispatcher are jointly responsible for the safe conduct of a flight. As several commenters point out the overall level of safety is enhanced when a dispatcher is available to assist and back up the pilots who already may have numerous responsibilities in addition to flying the airplane. Thus, while it may not be possible to pinpoint accidents that have actually been prevented by a dispatch system, there can be little doubt that the existence of a dispatch system contributes to the overall high level of safety of scheduled operations under part 121.

The FAA does not agree that use of dispatchers would lead to complacency on the part of the flight crewmembers. Section 121.663 states that for each domestic and flag operation, a dispatch release must be prepared based on information furnished by an authorized dispatcher. The pilot in command and an authorized dispatcher shall sign the release only if they both believe that the flight can be made safely. Dispatchers provide the necessary resources and expertise needed to review operational control issues.

In response to comments that in some companies "dispatch" functions are being adequately performed by individuals from three separate departments (operations, station managers, and company pilots), the FAA finds that operational control decisions can not be effectively made by three separate groups of individuals. The perception is that "whoever is available" makes the decision. For effective operational control, the dispatch process should be standardized and consistent.

In response to NATA's and others' comments on the nature of 10- to 19-seat certificate holders, the FAA finds that these certificate holders are not unique. The same situation currently exists for some part 121 certificate holders who are required to maintain dispatch systems.

In response to comments on the issue of limited areas of operation and short flight duration, the requirement for a dispatch facility is not based on distances, the type of aircraft, or weather patterns alone. It is the type of operation (scheduled) an air carrier is currently operating under that determines if dispatch systems are required. The role of the aircraft dispatcher in the operational control of aircraft provides an enhancement to safety that has clearly been established through years of operations by many air carriers in both domestic and flag operations. Continuous communications could be accomplished with HF radios or through satellite communications, both of which can be provided through vendors.

to current flight followers or flight locating personnel, § 65.57 outlines a means of providing credit for previous experience in order to take the practical test. All dispatcher applicants must complete the appropriate written and practical tests before a certificate can be issued. The FAA agrees that training costs will be incurred to prepare current flight following or flight locating personnel to qualify for a dispatcher certificate, regardless of who pays for the training. Replacement personnel will be needed if the decision by the certificate holder is to send current employees to dispatcher training.

There is no requirement for dispatchers to attend a formal school. Section 65.57, entitled experience requirements, allows several options in lieu of a formal school.

In response to specific requests to expand the criteria in § 65.57 (aircraft dispatcher experience requirements) to include personnel assigned to flight locating and flight following under part 135, the FAA believes that some part 135 experience is acceptable as equivalent experience in § 65.57. Through current policy and guidance provided to FAA inspectors, a review on a case-by-case could be accomplished to ascertain if an applicant has equivalent experience.

In response to comments on the current format of the dispatcher practical exam, § 65.59 requires an applicant for an aircraft dispatcher certificate to pass a practical test with respect to any one type of large aircraft used in air carrier operations. Further, current practical test standards require dispatcher applicants to exhibit adequate knowledge of applicable aircraft flight instruments and operating systems. The scope of the practical test allows for turboprop aircraft and representative commuter operations. Practical tests are developed by the inspector conducting the test and can be designed for any type of large aircraft, including turboprop airplanes.

There is only one dispatcher written examination, the Airline Transport Pilot question book. The selection sheet has questions applicable only to dispatchers and not based on any particular make and model of aircraft. The FAA is considering developing written tests geared to commuter-type operations. However, the current written exam is valid in that it tests for areas common to all make and models of aircraft. The test requires knowledge of various subject areas, i.e. the ability to interpret weather information, interpret regulations, handle emergencies, compute weight and balance, etc.

The FAA disagrees with the ALPA recommendation to require dispatchers to receive 5 hours of operating experience in aircraft they will actually dispatch. Section 121.463(c) requires the dispatcher to satisfactorily complete at least 5 hours of operating familiarization in one of the types of airplanes in each group he is to dispatch. Section 121.400(b) includes all sizes of propeller-driven aircraft under group 1. Therefore, the FAA allows dispatchers to complete the operating familiarization in airplanes that are not exactly the same size or configuration as the ones they will dispatch.

V.G. Airports

Section 121.590 requires that no air carrier or pilot conducting operations under part 121 may operate an airplane into a land airport in the U.S. (or territory, etc.) unless the airport is certificated under 14 CFR part 139. Section 135.229 states that no certificate holder may use any airport unless it is adequate for the proposed operations.

Part 139 prescribes regulations governing the certification and operation of all land airports that are served by any scheduled or nonscheduled passenger air carrier operating airplanes with a seating capacity of more than 30 passengers. The FAA's authority is limited by statute (49 U.S.C. 44706(a)) to the 30-passenger-seat dividing line. The FAA, in conjunction with the Department of Transportation, has sought legislation that would grant the agency the authority to certificate any airport that receives scheduled service by a certificate holder utilizing airplanes designed for 10 or more passenger seats.

Accordingly, pending Congressional resolution of this issue, affected commuters are permitted to operate into other than part 139 certificated airports. If the FAA receives expanded authority over airport certification, it would propose rulemaking standards that are sufficiently flexible to cover the range of airports presently served under part 135.

NATA and Commuter Air Technology concur with the FAA proposal to allow part 135 certificate holders to continue to operate with existing airport requirements, but are concerned about the airport expansion program. NATA prefers that no new airport legislation be adopted and that the proposed regulatory allowance for noncertificated airports be made permanent.

A comment from Fairchild Aircraft mentions the Essential Air Service Program enacted by Congress that guarantees air service to small and medium size communities. Fairchild says that the commuter industry responded to that program and provided essential air service to small and medium communities, and that those communities may not be able to afford the proposed airport expansion program.

Other commenters state that it would not be feasible to upgrade smaller airports to part 139 standards. One certificate holder states that of the five airports it serves only one meets part 139 standards; at the other airports where the certificate holder provides essential air service "there is no aircraft rescue or fire fighting equipment, airport guidance signs, airfield inspection procedures, airport staff, snow and ice control plan, or airfield pavement maintenance. . . ."

The American Association of Airport Executives (AAAE), RAA, Airports Council International-North America, and the National Association of State Aviation Officials would like the airport expansion issue referred to an ARAC committee before seeking federal legislation, to allow ARAC to develop a cost-effective response to NTSB recommendations that takes into account the difference between small airports that serve rural communities and large airports near major cities.

ALPA believes that the FAA should require commuters to operate out of part 139 certificated airports in the interest of one level of safety. ALPA recognizes that some airports in remote sites will not be capable of complying with all part 139 requirements. However, ALPA does not believe that an exemption should be provided for aircraft with passenger-seating capacities of 30 or less. Rather certificate holders that serve small airports should apply individually for an exemption or waiver.

Commuter Technology expresses concern that a revised part 139 may result in the application of airplane operator security regulations of part 108 and the airport security regulations of part 107 to air carriers using aircraft with a seating capacity of 30 or fewer seats. The commenter believes that the ARAC committee that is tasked with recommending revisions to part 139 should also be tasked with restricting or eliminating the applicability of part 107 to small airports. According to the commenter the application of parts 107 and 108 to commuter air carriers and the airports that serve them could have a radical effect on the economic viability of the air carriers and airports.

FAA Response: The FAA has assigned a task to the Aviation Rulemaking Advisory Committee (ARAC) to recommend the requirements in part 139 that should be applicable to airports covered under any expanded legislation that would give the FAA authority to certificate airports serving airplanes with less than 30 passengers. In the meantime, § 121.590 is adopted as proposed to allow affected commuters to use noncertificated airports. In making its recommendations ARAC is to consider accepted industry practices regarding airport safety, personnel available at these airports, costs associated with meeting these requirements (e.g. capital, operating, and maintenance costs), and the types of accidents/incidents that have occurred at these airports.

In response to the comment on security programs for airports and operators, no changes to parts 107 and 108 are necessary as a result of this rule because the requirements of those parts are already tailored to the size of the airplane.

V.H. Effective Date and Compliance Schedule

The FAA proposed an effective date of 30 days and a general compliance date of 1 year after publication of the final rule. The FAA stated in Notice 95-5 that a final rule, if adopted, would be published by December 31, 1995, and that within 1 year of that date, that is, by December 31, 1996, all affected certificate holders that have air carrier certification or operating certificates issued under

Comments: Eleven comments were received on this issue. Several commenters express a desire for an "incremental" or "phased" compliance schedule. Two commenters are concerned that the proposed "turnkey" recertification event is high risk with no early rewards or benefits.

RAA suggests revising proposed §§ 121.2(c) and 135.2(c) to require compliance "not later than" 1 year after final rule publication rather than the proposed "as of," and adding the word "complete" before "14 CFR part 121 operations specifications." RAA also suggests adding a new paragraph to the section that would state that a certificate holder may be authorized under its transition plan to comply with portions of part 121 instead of the equivalent portions of part 135 in advance of being issued complete 14 CFR part 121 operations specifications. Accordingly RAA recommends adding to the transition plan requirements of paragraph (g) a new subparagraph to include in the transition plans provisions for interim compliance with portions of part 121 in advance of obtaining complete 14 CFR 121 operations specifications. Other commenters also request provisions for complying with portions of part 121 in advance of obtaining part 121 operations specifications.

Other commenters also state concerns about FAA's capacity to facilitate the transition process on schedule. Two commenters perceive a shortage of trained inspectors and suggest that the compliance date be extended if an adequate number of inspectors are not provided by mid year 1996. GAMA suggests a reevaluation of the implementation schedule of § 121.2(d)(1), citing a questionable number of aircraft certification service personnel to support the extensive design approval activity certain to occur. Another commenter expresses concern over the necessary type certification activity surrounding modifications and suggests that 1 year is an unrealistic compliance deadline given the current FAA Aircraft Certification Office backlog.

RAA is concerned that the population of FAA inspectors qualified to perform their duties under part 121 will not be able to respond to the new part 121 air carriers. According to RAA, FAA inspectors must be trained and qualified to help affected commuters achieve the transition. RAA recommends a "fill in the blanks manual" to achieve standardization among FAA regions and districts. If there is an insufficient number of qualified FAA inspectors, the 1996 compliance date should be delayed.

ASA proposes a standardized transition program including three elements: (1) a fill-in-the-blanks manual for transitioning carriers; (2) an automatic exemption and incremental approval process; and (3) time schedules from transitioning carriers submitted to FAA.

Mesa Airlines recommends pre-formal certification meetings with principal operations inspectors (POI's) at an early date to familiarize both parties with the certification process outlined in FAA Order 8400.10. According to Mesa, compliance statement development, individual operator transition plans, GOM (general operating manual) development, and formal certificate application should be scheduled for the spring of 1996 to allow adequate review by respective POI's. According to Mesa this would allow certificate holders to be running their commuter operations under part 121 rules by the summer of 1996. This in turn would allow for a start-up phase for part 121 dispatch operations and modifications to the requirements for proving runs as proposed in § 121.163 and would eliminate the necessity for formal initial operating experience (IOE).

There were several comments on specific compliance dates. ALPA is generally pleased with the compliance schedule, but states that the 4-year compliance date for the installation of pitot heat indication systems could be shortened to 2 years, given the relative ease of the modification. Fairchild Aircraft finds fault with the fact that a 2-year delay is provided for compliance with emergency exit handle illumination, but no delay is allowed for compliance with § 121.310(b)(2)(ii), which would require the replacement of exit signs on new commuter category airplanes. Mesa Airlines suggests that compliance with part 121 crew flight and duty limitations be changed to January 1, 1997.

FAA Response: The final rule has a 30-day effective date and a general compliance date of 15 months after publication of the final rule. The FAA is extending the general compliance date to be

training planned for January 1996 will focus on the recertification and transition process. Extensive guidance material is being prepared to assist the inspectors during the transition process. Portions of this material will also be made available to the affected commuters.

The FAA agrees with Mesa Airlines that meetings between POI's and affected commuters would help facilitate the preparation of the transition plan, which is due 90 days from today, and the planning necessary to ensure that normal operations can continue during the transition phase. The FAA believes that the training given to its inspectors, the guidance material being prepared, and a cooperative working relationship between the affected commuters and the FAA will ensure a smooth transition to part 121 operations.

The transition plan must include the certificate holder's proposed calendar of events that shows how and when it plans to make changes in its operations to meet the requirements of part 121. The transition plan should also show detailed plans for accomplishing activities and necessary retrofits for requirements with delayed compliance dates. The POI and the certificate holder will schedule the inspections necessary to show compliance with part 121 requirements. When the inspections are complete and the FAA has determined that the certificate holder can comply with part 121, the FAA will issue new operations specifications. Until the new operations specifications are issued, the existing operations specifications remain in effect. In any case the existing operations specifications expire on: (1) The date the new operations specifications are issued; or (2) 15 months from this date of publication, whichever is earlier. Affected certificate holders who want to comply with certain part 121 requirements in advance of being issued complete 14 CFR part 121 operations specifications could include in their transition plan a phased schedule including advance compliance for certain part 121 requirements, subject to their POI's approval.

Table 1—Summary of Modifications shows the compliance dates for certain retrofit and performance requirements for affected commuters. Many of these are required by the end of the basic 15-month compliance period. Affected commuters should be aware that by the specified date they must comply with all part 121 requirements, not just the ones listed on Table 1. Although the table includes additional items that were not listed in the table in Notice 95–5, no new requirements are involved. Not all requirements are in the table. The purpose of the table is to show the compliance dates for certain equipment and performance requirements that necessitate advance planning for purchasing and installation. Many of the delayed requirements apply to airplanes in the current fleet, while others apply only to newly manufactured airplanes.

It should also be noted that § 121.2(h) requires a certificate holder to comply with corresponding part 135 requirements, as applicable, in the interval between the effective date of this rule and when the certificate holder is in compliance with the part 121 requirements. In addition, the intent of § 121.2(h) is also included in specific sections that have delayed compliance dates.

This table does not apply to certificate holders currently operating under part 121. The passenger seating configuration numbers provided in the chart do not mean that the requirement applies only to that size airplane but rather that the requirement is new for that size airplane.

Table 1.—Summary of New Equipment and Performance Modifications for Affected Commuters

| Effective date of required upgrade is as stated, measured from the rule publication date | Upgrade will apply to all airplanes including newly manufactured airplanes | | Upgrade will apply to all newly manufactured airplanes |
|--|--|------------------|--|
| | Within 15 months | Within years (#) | After years (#) |
| 1. Passenger Seat Cushion Flammability, 10–19 Pax §§ 121.2, 121.312(c) | | 15 | |
| 2. Lavatory Fire Protection, 10–30 Pax §§ 121.2, 121.308 | | 2 | |

| | | | |
|---|------------------|-----------------|------------------------|
| 4. Pitot Heat Indication System, 10-19 Pax §§ 121.2, 121.342 | | 4 | |
| 5. Landing Gear Aural Warning, 10-19 Pax §§ 121.2, 121.289 | | 2 | |
| 6. Takeoff Warning System, 10-19 Pax §§ 121.2, 121.293 | | | 4 |
| 7. Emergency Exit Handle Illumination, 10-19 Pax §§ 121.2, 121.310(e)(2) | | 2 | |
| 8. First Aid Kits, 10-19 Pax § 121.309(d)(1)(i) | Yes | | |
| 9. Emergency Medical Kits, 20-30 Pax § 121.309(d)(1)(ii) | Yes | | |
| 10. Wing Ice Light, 10-19 Pax § 121.341(b) | Yes | | |
| 11. Fasten Seat Belt Light and Placards, 10-19 Pax §§ 121.2, 121.317 | Yes ¹ | | 2 ¹ |
| 12. Third Attitude Indicator, 10-30 Pax: Turbojet | Yes ² | | |
| Turboprop §§ 121.2, 121.305(j) | | 15 ² | 15 months ² |
| 13. Airborne Weather Radar, 10-19 Pax § 121.357 | Yes | | |
| 14. Protective Breathing Equipment, 10-30 Pax § 121.2 | | 2 | |
| § 121.337(b)(8)—Smoke and fume protection | | | |
| § 121.337(b)(9)—Fire fighting (20-30 only) | | | 15 months |
| 15. Safety Belts and Shoulder Harnesses, Single point inertial harness, 10-19 Pax §§ 121.2, 121.311(f) | | | |
| 16. Cabin Ozone Concentration, 10-30 Pax § 121.578 | Yes | | |
| 17. Retention of Galley Equipment, 10-30 Pax §§ 121.576, 121.577 | Yes | | |
| 18. Ditching approval, 10-30 Pax §§ 121.2, 121.161(b) | Yes ³ | 15 ³ | |
| 19. Flotation means, 10-30 Pax §§ 121.2, 121.340 | | 2 | |
| 20. Door Key and Locking Door, 20-30 Pax § 121.313(f) & (g) | Yes | | |
| 21. Portable O2, 20-30 Pax § 121.327-121.335 | Yes | | |
| 22. Additional life rafts, 10-30 Pax § 121.339 | Yes | | |
| 23. First Aid Oxygen, 20-30 Pax § 121.333(e)(3) | Yes | | |
| 24. Enroute radio communications, 10-30 Pax § 121.99 | Yes | | |
| 25. Latex gloves, 10-30 Pax § 121.309(d)(2) | Yes | | |
| 26. Passenger information cards, 20-30 Pax § 121.571(b) | Yes | | |
| 27. Flashlights-additional for flight attendant and pilot, 10-30 Pax § 121.549(b) | Yes | | |
| 28. Flashlight holder for flight attendant, 20-30 Pax § 121.310(l) | Yes | | |
| 29. DME, 10-30 Pax § 121.349(c) | Yes | | |
| 30. Single engine cruise performance data, 10-30 Pax (required for determining alternates) § 121.617 | Yes | | |
| 31. Performance, Obstruction Clearance, and Accelerate-stop Requirements, 10-19 Pax §§ 121.2, 121.157, 121.173(b), 121.189(c) | Yes ⁴ | 15 ⁴ | |

¹ In-service airplanes must comply within 15 months. They may use lights or placards. Newly manufactured airplanes must comply with seat belt sign requirements of § 121.317(a) within 2 years.

² Turbojet airplanes must comply within 15 months. Newly manufactured turboprop airplanes must comply within 15 months. In-service 10-30 pax turboprop airplanes must comply within 15 years.

³ Transport category must comply within 15 months. Nontransport category can operate for 15 years without ditching approval.

⁴ Commuter category airplanes must comply within 15 months. SFAR 41 and predecessor category airplanes must comply within 15 years.

[This table shows the comparable sections in parts 121 and 135 for each issue discussed in this preamble. Affected commenters, however, must comply with all sections in part 121 that are applicable to their operations, not just the ones listed in this table or discussed in this preamble]

| <i>Subject</i> | <i>135 Section</i> | <i>121 Section</i> |
|---|-------------------------------|-----------------------------------|
| Subparts E and F—Approval of Routes: Domestic, Flag, and Supplemental Operations | 135.213 | 121.97, 121.99, 121.101, 121.107. |
| Subpart G—Manual Requirements | 135.21, .23 | 121.133, .135, 121.137. 121.141. |
| —Contents and personnel | | |
| —Airplane flight manual | | |
| Subpart I—Airplane Performance Operating Limitations | 135.365–.387 | 121.175–.197. |
| Subpart J—Special Airworthiness Requirements | | 121.217. |
| —Internal doors | 135.87 | 121.285. |
| —Cargo carried in the passenger compartment | 135 App. A | 121.289. |
| —Landing gear aural warning device | | 121.291. |
| —Emergency evacuation and ditching demonstration. | | |
| —New special airworthiness requirements (retrofit) and requirements applicable to future manufactured airplanes | | 121.293(a) (new). |
| —Ditching emergency exits | | 121.293(b) (new). |
| —Takeoff warning system | | |
| Subpart K—Instrument and Equipment Requirements: | | |
| —Third attitude indicator | 135.149 | 121.305(j). |
| —Lavatory fire protection | 135.163 (a), (h) | |
| —Emergency equipment inspection | | 121.308. |
| —Hand-held fire extinguishers | 135.177(b) | 121.309(b). |
| —First aid kits and medical kits | 135.155 | 121.309(c). |
| —Crash ax | 135.177(a)(1) | 121.309(d). |
| —Emergency evacuation lighting and marking requirements | 135.177(a)(2), 135.178(c)–(h) | 121.309(e), 121.310(c)–(h). |
| —Seatbacks | | |
| —Seatbelt and shoulder harnesses on the flight deck | 135.117 | 121.311(e), 121.311(f). |
| —Interior materials and passenger seat cushion flammability | 135.169(a) | 121.312(b). |
| —Miscellaneous equipment | | 121.313 (c), (f), (g). |
| —Cockpit and door keys | | 121.313(f). |
| —Cargo and baggage compartments | | 121.587. |
| —Fuel tank access covers | | 121.314, .221. |
| —Passenger information | | 121.316. |
| —Instruments and equipment for operations at night | 135.127 | 121.317, 121.323. |
| —Oxygen requirements | | |
| —Portable oxygen for flight attendants | 135.157 | 121.237–.335, 121.333(d). |
| —Protective breathing equipment (PBE) | | 121.337. |
| —Additional life rafts for extended underwater operations | 135.167 | 121.339. |
| —Flotation devices | | |
| —Pitot heat indication system | | 121.340. |
| —Radio equipment | 135.158 | 121.342. |
| —Emergency equipment for operations over uninhabited terrain | 135.161, .177, .178 | 121.345–.351, 121.353. |
| —TCAS | | |
| —Flight data recorders | 135.180 | 121.356. |

| | | |
|---|----------------------------------|---|
| and Alterations: | | |
| —Applicability | 135.411(a)(2) | 121.361. |
| —Responsibility for Airworthiness | 135.413 | 121.363. |
| —Maintenance, preventive maintenance, and alteration organization | 135.423, .425 | 121.365, .367. |
| —Manual requirements | 135.427 | 121.369. |
| —Required inspection personnel | 135.429 | 121.371. |
| —Continuing analysis and surveillance | 135.431 | 121.373. |
| —Maintenance and preventive maintenance training programs | 135.433 | 121.375. |
| —Maintenance and preventive maintenance personnel duty time limitations | | 121.377. |
| —Certificate requirements | 135.435 | 121.378. |
| —Authority to perform and approve maintenance, preventive maintenance, and alterations | 135.437 | 121.379. |
| —Maintenance recording requirements | 135.439(a)(2) | 121.380(a)(2). |
| —Transfer of maintenance records | 135.441 | 121.380a. |
| Subpart M—Airman and Crewmember Requirements: | | |
| —Flight attendant complement | 135.107 | 121.391. |
| —Flight attendants being seated during movement on the surface | 135.128(a) | 121.391(d). |
| —Flight attendants or other qualified personnel at the gate | | 121.391(e), 121.417, 121.393 (new). |
| Subparts N and O—Training Program and Crewmember Requirements | | 121.400–121.459. |
| Subpart P—Aircraft Dispatcher Qualifications and Duty Time Limitations: Domestic and Flag Air Carriers | | 121.461–121.467. |
| Subparts Q, R, and S—Flight Time Limitations and Rest Requirements: Domestic, Flag, and Supplemental Operations | 135.261–135.273 | 121.470–121.525. |
| Subpart T—Flight Operations: | | |
| —Operational control | 135.77, .79, 135.75, 135.69, .19 | 121.533, .535, 121.537, 121.547, 121.551, .553. |
| —Admission to the flight deck | | 121.557, .559, 121.565 (new). |
| —Emergency procedures | 135.117, .127 | 121.571(a), 121.533, .573, 121.585. |
| —Passenger information | 135.91(d) | 121.574. |
| —Oxygen for medical use by passengers | 135.121, 135.87, .122 | 121.575, 121.577. |
| —Alcoholic beverages | | 121.578(b). |
| —Retention of items of mass | 135.93 | 121.579. |
| —Cabin ozone concentration | | |
| —Minimum altitudes for use of autopilot | 135.75, 135.23(q) | 121.581, 121.586. |
| —Forward observer's seat | | |
| —Authority to refuse transportation | 135.87, 135.229, .217 | 121.589, 121.590. |
| —Carry-on baggage | | 121.617(a). |
| —Airports | | |
| Subpart U—Dispatching and Flight Release Rules: | | |
| —Flight release authority | | 121.597. |
| —Dispatch or flight release under VFR | 135.211 | 121.611. |
| —Operations in icing conditions | 135.227, .341, 135.345 | 121.629. |
| —Fuel reserves | 135.209, .223 | 121.639, .641, 121.643, .645. |
| Subpart V—Records and Reports | 135.65(c), 135.415(a) | 121.701(a), 121.703 (a), (e). |
| —Maintenance log: Airplane | 135.417 | 121.705(b). |
| —Mechanical interruption summary report | 135.439(a)(2), 135.443 | 121.707, 121.709. |
| —Alteration and repair reports | | |

Section 121.97 requires each domestic and flag operator to show that each route it submits for approval has enough airports that are properly equipped and adequate for the proposed operation. The operator must also have an approved system to disseminate this information to appropriate personnel. Although part 135 has similar requirements, part 121 requires more information.

Section 121.99 requires each domestic and flag operator to have a two-way air/ground communication system between each airplane and the appropriate air traffic control facility, along the entire route. In the 48 contiguous States and the District of Columbia, the communications system between each airplane and the dispatch center must be independent of any system operated by the United States. This would be a new requirement for the affected certificate holders.

Section 121.101 requires each domestic and flag operator to show that enough weather reporting facilities are available along each route to ensure weather reports and forecasts necessary for the operation. For operations within the 48 contiguous States and the District of Columbia, these reports must be prepared by the National Weather Service. For other areas, a system must be approved by the Administrator. Section 135.213 has similar requirements, except that the pilot in command is allowed to use various other sources, including his own weather assessment, for VFR operations. This section also requires reports of adverse weather phenomena. The FAA proposed that affected certificate holders comply with part 121.

Section 121.107 requires each domestic and flag operator to have enough dispatch centers, adequate for the intended operation. This would be a new requirement for affected certificate holders, as discussed in section V.F., Dispatch System.

Comments: ALPA comments that the upgrade to part 121 represents a major improvement over part 135. ALPA also comments that Subparts E and F should be upgraded to require that each pilot have a set of approach and navigation charts rather than having to share a set. ALPA provides supportive information, such as an NTSB recommendation (A-95-35) for a similar requirement.

Several comments were received on the enroute radio communication requirements of § 121.99. ASA and RAA question the need for airline provided enroute radio communication capability for short-haul flights and request that the requirement be reconsidered. According to these commenters, the average enroute times for affected certificate holders is less than an hour. For such short flights there is little time during the enroute portion of a flight for company communication. The cost of installing company communications would be high and safety would not be diminished without company communication since the crew can be contacted through Air Traffic Control.

AACA points out that this would be a new requirement for affected commuters. Intrastate Alaskan operations now conducted under flag operations rules will be conducted under domestic rules and would be required to comply with the independent communications systems requirements. Because of low altitudes, VFR flight operations, and the lack of Remote Communications Outlet at many locations, maintaining communications will require construction of a large communications infrastructure. When operators in Alaska use flag rules, AACA interprets § 121.99 to not require the communications system be independent of any system operated by the United States.

FAA Response: The ALPA suggestion on requiring that each pilot have a separate set of navigation and approach charts is beyond the scope of this rulemaking; however, the FAA is planning to initiate a separate rulemaking on the issue.

Section 121.99 requires each domestic and flag air carrier to have a two-way radio communication system that is independent of any system operated by the United States. FAA flight service stations and air traffic control facilities that are currently providing radio communication service for certificate holders are used for the control of aircraft and were never intended to be used by individual certificate

conducted under flag operations rules. While no commenters focus on § 121.97 or § 121.117, the FAA points out under §§ 121.97(b)(4)(i) and 121.117(b)(4)(i) affected operators will be required to comply with airport data requirements which include applicable performance requirements of Subpart I. For affected airplanes these performance requirements will be found in new appendix K to part 121 as referenced in subpart I.

VI.A.2. Subpart F—Approval of Routes: Approval of Areas and Routes for Supplemental Air Carriers and Commercial Operators

This subpart is similar to subpart E except that it applies to supplemental operations and prescribes flight following requirements. Under the proposal, this subpart would apply in cases where an affected operator uses an airplane that is also used in domestic operations to conduct a nonscheduled operation. On this issue, no comments were received and the final rule is adopted as proposed.

VI.A.3. Subpart G—Manual Requirements

Manual requirements: Contents and personnel: Under subpart G of part 121 certificate holders are required to prepare and keep current a manual containing policies, procedures, applicable regulations, and other information necessary to allow crewmembers and ground personnel to conduct the operations properly (see § 121.133 and § 121.135). While the requirements of parts 121 and 135 are similar, part 121 manual requirements contain a more extensive list of manual contents (§ 121.135). Under part 121 the manual or appropriate parts must also be furnished to more personnel, such as aircraft dispatchers and flight attendants, and made available to others, such as station agents. Notice 95-5 stated that the effect of these differences between compliance with part 121 versus compliance with part 135 would be significant for commuter operators. The proposal would require developing, producing, and distributing new manuals appropriate to part 121. In addition, § 121.137 requires the air carrier to issue a manual or appropriate parts to each crewmember and requires each crewmember to keep the manual up to date and have it with him or her when performing assigned duties. Part 135 does not require that flight attendants be issued a manual; however, it does require that any person to whom a manual is issued must keep it up-to-date (see § 135.21).

Comments: Fairchild Aircraft states that § 121.137 would require at least one copy of the manual specified by § 121.133 to be carried in the airplane and that this is a reasonable proposal that they fully support. Fairchild Aircraft also states that § 121.141(b)(2) contains a reference to “rotorcraft” which should be deleted.

ALPA states that the key to an efficient, safe airline operation can normally be found in the manuals developed by the airline. ALPA supports the FAA in adopting all facets of Subpart G. ALPA also states that § 121.135(b)(2) should be amended by removing, “in the case of supplemental air carriers and commercial operators,” so that the paragraph reads: “Duties . . . of the ground organization, and management personnel.” According to ALPA, the requirement to include in the manual duties and responsibilities of management personnel would no longer be applicable only to supplemental and commercial operators since proposed part 119 requires management personnel for all certificate holders.

One commenter states that § 121.133 should require compliance with the certificate holder’s manuals.

Metro International Airways states that the cost of new manuals would be excessive for small businesses and that an outline of procedures would be a more useful reference than a highly detailed manual.

FAA Response: All but one of the comments received regarding the manual requirements support the implementation of Subpart G of part 121. Only one comment regarding the costs associated with the manuals required by § 121.131 was received.

Additionally, the FAA has received requests from certificate holders that would like to begin the process of transition prior to implementation of the rule. This would allow those certificate holders to

must comply with the regulations in part 121 (and other applicable regulations). Requirements for preparing and maintaining a manual serve the purpose of supplying information to personnel. Information in the manual must be accurate and consistent with the regulations. Since the manual may also include company policy and guidance to personnel, all portions of the manual are not enforceable as regulations. The language of the manual requirements does, however, imply that the certificate holder must adhere to all of the contents of the manual and that the certificate holder's personnel must use the manual in conducting operations.

In response to the comment that the manual requirements will be a burden for small businesses and that an outline of procedures would be more helpful to personnel, small certificate holders are already meeting the manual requirements of part 135; this rulemaking requires an update of manuals and broader distribution of the manuals. An outline of procedures could be used as guidance in addition to the manuals or as part of a manual, but under current part 135 it would not suffice as meeting the manual requirements.

In the final rule § 121.133 has been revised to update the terminology.

VI.A.4. Subpart H—Airplane Requirements

For comments and FAA responses to the requirements in § 121.157, Aircraft certification and equipment requirements, see the discussion in section V. C., Aircraft Certification.

Single-engine airplanes. Section 121.159 prohibits operation of single-engine airplanes under part 121. No change to this prohibition was proposed since the FAA does not consider single-engine airplanes acceptable to part 121 standards. Under the proposal, this section was amended to delete an obsolete reference to § 121.9. No comments were received on this issue and the final rule is adopted as proposed. For a related discussion on the operation of single-engine Otters, see "Applicability: Alaska," in section V.B.

Airplane limitations: Type of route. Section 121.161(a) requires that a two-engine or three-engine airplane except a three-engine turbine powered airplane must be within 1-hour flying time from an adequate airport at normal cruising speed with one engine inoperative, unless otherwise approved by the Administrator. Part 135 does not contain a comparable requirement; however, the FAA proposed that affected commuters would comply with the requirements of § 121.161(a).

Section 121.161(b) contains a separate requirement that (with some exceptions for certain older airplanes) no person may operate a land plane in extended overwater operations unless it is certificated or approved as adequate for ditching. The FAA proposed that affected commuters would also comply with the requirements of § 121.161(b). In Notice 95-5, the FAA invited specific comments on the potential impact of these proposals on operations in Alaska.

Comments: Several comments were received on the § 121.161(a) requirement to be within 1 hour of an airport with one engine inoperative. One commenter suggests that § 121.161 be rewritten to reflect today's environment, since no airport in the U.S. is more than 1 hour away for these commuter airplanes. The commenter also states that the rule should specify the requirements for two-engine operations over the water.

Fairchild and AIA both state that § 121.161(a) would require single-engine cruising speed data and this data is unlikely to be included in some Airplane Flight Manuals (AFM). The commenters also state that there appears to be no safety benefit and it will be difficult to show compliance. According to these commenters, the final rule should except 10-30 passenger seat airplanes.

Phoenix Air anticipates that its operations with a Grumman G-159 Gulfstream airplane would be disrupted due to the requirements of § 121.161, since they intend to start service between Honolulu and Midway Island. There are no airports that would be within 1 hour of the intended flight path.

FAA Response: Despite the comments to the contrary, the FAA has decided to adopt its proposal to apply the route limitation requirements of § 121.161(a) to the 10- to 30-seat airplanes operated by the affected commuters. Under that section any route flown by a twin engine commuter type airplane must be flown so that it is within 1 hour of an adequate airport for landing. Part 121 and its predecessor regulations have applied route limitation requirements to airplanes operating under those requirements since 1936. While the specific details of the route limitation requirement have changed over the years, the underlying safety issue has not; the certificate holder must show, before operating affected airplanes over a route, that it can safely continue flight in an emergency situation to an airport adequate for landing. The FAA understands that some of these airplanes will require an AFM revision that will provide engine-out cruise speed data. There are routes in areas outside of the contiguous U.S. that are more than 1 hour flying time (with one engine inoperative) from an adequate airport. In accordance with § 121.161(a), the Administrator may authorize a deviation from the requirement, if the operator can show that the 1-hour flight time limit is not necessary based on the character of the terrain, the kind of operation, or the performance of the airplane. Obtaining authorization to conduct extended range operations with two-engine airplanes is dependent upon many factors. Some of these factors are a type design review of the airframe system, a review of the in-service history of the airplane propulsion system, and an assessment of the certificate holder's maintenance and inspection program capability for extended range operations. Advisory Circular 120-42 provides the guidelines for this authority. Other rules provide the requirements for extended overwater routes.

The Douglas DC-3 and Curtiss C-46 airplanes excluded from § 121.161(b) were type certificated and manufactured before the present standards of part 25 were adopted. These aircraft were excluded because of their previous operating experience which showed, in some cases through actual ditchings, that these old airplanes could ditch satisfactorily. The Convair 240, 340, and 440 and Martin 404 airplanes were also type certificated before the present standards were adopted. They were excluded because tests conducted by the National Advisory Committee for Aviation showed they would have excellent ditching characteristics. Unlike current part 25, part 23 contains no standards for ditching approval. Unlike those older airplanes excluded in § 121.161, none of the part 23 airplanes have been shown to comply with any ditching standards. Contrary to the commenter's assumption, requiring part 23 airplanes used in extended overwater operations to meet the ditching certification requirements was not an oversight. In Notice 95-5 preamble, the FAA concluded that these requirements should be applied to the operations that would be moved from part 135 to part 121.

After considering the comments, the FAA has determined that until 15 years after the date of publication of the final rule a certificate holder may operate in an extended overwater operation a nontransport category land airplane type certificated after December 31, 1964, that was not certificated for ditching under the ditching provisions of part 25 of this chapter. Section 121.161(c) has been added accordingly.

Proving tests. Section 121.163 provides proving test requirements for part 121. In addition to aircraft certification tests, an aircraft to be operated under part 121 must have at least 100 hours of proving tests for an airplane not previously proven for use in part 121 operations, and 50 hours of proving tests for an airplane previously proven for use in part 121 operations. The number of hours may be reduced by the Administrator. Section 135.145 requires 25 hours of proving tests in addition to certification tests for certificate holders that operate turbojet airplanes or airplanes for which two pilots are required for operations under VFR if that airplane or an airplane of the same make and similar design has not been previously proved in any operations under part 135. Both §§ 135.145 and 121.163 require proving tests for materially altered airplanes. However, under § 121.163, proving tests apply to each airplane to be operated under part 121. Under part 135 proving tests apply to each aircraft or to aircraft of similar make and design. Part 121 also describes three types of proving tests. Under part 121, the initial operator of a type of airplane must conduct at least 100 hours of proving tests, acceptable to the FAA, which can be reduced in appropriate circumstances. Moreover, for each kind of operation

...comments that proving flight hours should be reduced based on "experience and performance" factors. To facilitate a reduction in flight hours, the FAA should identify those specific procedures for which non-revenue proving flights would be required and specify a realistic number of flights or flight hours which would be sufficient to demonstrate those procedures.

ASA believes that the requirement for proving flights will result in an increase in both initial and recurring costs. United Express joins ASA in proposing that FAA recognize the experience level of air carriers operating under part 135 and permit proving tests to be conducted during revenue service. United Express further proposes that the required number of hours be reduced for those carriers currently using a dispatch system.

Big Sky Airlines recommends a waiver of the requirement for a proving test for airlines that have a good safety record and proven experience. The commenter justifies its recommendation on the basis of excessive and unnecessary burden and cost.

Commuter Air Technology requests clarification concerning which modifications to specific aircraft would require 100-hour initial proving tests.

FAA Response: Section 121.163 has two main parts. Paragraph (a) prohibits a carrier from operating an aircraft type in scheduled service that has never been used in scheduled service until it has flown 100 hours of proving flights. These hours are in addition to any aircraft certification tests. For the purposes of this rulemaking, the FAA recognizes that the current commuter fleet has established a sufficient history of operations and does not intend to require the 100 hours of proving flights for aircraft currently being operated by those carriers affected by this rulemaking. Paragraph (b) of § 121.163 requires 50 hours of tests for the carrier to show that not only can it operate and maintain the aircraft, but also that it has the ability to conduct a particular kind of operation (i.e., domestic or flag) in compliance with the applicable regulatory standards.

The FAA agrees that carriers currently conducting operations under both part 121 and part 135 (split certificates) will be eligible to apply for a reduction of the number of hours required to conduct the demonstration required by paragraph (b). In regard to the comment that flight crewmembers that are new to part 121 operations will demonstrate their proficiency during accomplishment of a line check, the FAA does not agree that this could take the place of proving flights. The primary focus of proving flights is not simply to test the proficiency of flight crewmembers but to test the company's operational control procedures for the airplanes that will be operated in accordance with the requirements for a new kind of operation, i.e., flag or domestic. The FAA supports the idea that proving flight hours should be reduced based on "experience and performance" factors. The FAA has begun to identify those specific procedures for which proving flights would be required and to specify a realistic number of flights or flight hours which would be sufficient to demonstrate those procedures. This guidance to FAA inspectors will be provided in a revision to Order 8400.10.

The FAA agrees that proving tests will require an expenditure of the carrier's financial resources. Safety requires these proving tests to determine that an operator can conduct operations under part 121 safely, using new procedures, dispatches, etc. The FAA recognizes the experience level of air carriers operating under part 135 and, based on the carrier's experience with part 121, will provide FSDO inspectors with written guidance on approving deviations from the requirements of § 121.163. The FAA believes that proving tests are an essential part of the certification process and also provide the carrier with an opportunity to do some "dry-runs" before beginning revenue service under a completely new set of regulatory standards. The FAA's intent is to provide inspectors with the authority to provide deviations from the proving test requirements. FAA Headquarters will review each proposed reduction of proving test hours and will concur or not concur with the proposed number of hours for each affected commuter.

In response to Commuter Air Technology's request for clarification concerning which modifications to specific aircraft would require 100 hour initial proving tests, § 121.163(d) contains criteria for when a type of aircraft is considered to be materially altered in design.

early 1940's. However, many airplanes type certificated over the last 20 years used by direct predecessors (e.g., commuter category and SFAR 41 airplanes and predecessor categories), are also nontransport category. Therefore, the FAA proposed to delete the term "transport category" throughout subpart I and to include language where appropriate to except airplanes type certificated before January 1, 1965, that were not certificated in the transport category. This would have the effect of requiring airplanes type certificated in the commuter category or a commuter category predecessor to be operated under the performance operating limitations of §§ 121.175 through 121.197, as applicable.

Comments: ALPA states that all requirements of part 121 subpart I should be complied with by all turbo-propeller airplanes with a passenger capacity of 10 or more.

AACA concurs that airplanes with 10 to 19 seats should be required to comply with all of the proposed modifications (in Table 1 of Notice 95-5) except for part 121 performance and obstruction clearance and floor proximity lighting. (See later discussion of floor proximity lighting.)

Jetstream, RAA and ALPA support the overall proposals concerning the higher level of performance requirements. However, they join with Commuter Air Technology, Raytheon and an individual to point out that additional performance data/charts would need to be developed (for example: accelerate-stop and obstacle clearance data). RAA also recommends a 2-year time frame instead of the proposed 1-year performance compliance date.

Jetstream states that Notice 95-5, in conjunction with other proposed rules and changes, will introduce more weight to the aircraft. In addition to this, AC 120-27D, Aircraft Weight and Balance Control, will increase standard average passenger weights used for calculations. The combined effect is that these aircraft will no longer be allowed to carry 19 passengers due to reduced payload capacity. According to the commenter, the combined effect of the weight changes is about two passengers.

Jetstream and Raytheon comment that current FAA policy should be revised to allow manufacturers to increase the maximum takeoff weights for aircraft certificated under SFAR 41. They justify their comments by stating that the increase in maximum takeoff weight will provide a mitigation of the additional equipment weights incurred under this rulemaking.

One commenter states that better weight and balance control by the FAA is necessary because many operators are flying over maximum weight.

Fairchild, Jetstream, and AIA propose that the FAA incorporate the language of § 135.181(a)(2) into § 121.191, which would provide, in their view, a more conservative approach to one engine inoperative enroute operations. Jetstream also notes that there is no requirement for commuter airplanes to show Net En Route Flight Path data in their AFM's.

One commenter suggests that part 121 be written to specify the exact performance requirements for nontransport category airplanes to be included in their performance manuals so there would be no confusion with other FAA performance requirements.

Fairchild and AIA suggest deleting all references to "transport category" in §§ 121.189 through 121.197.

FAA Response: Section 121.135(b) requires that the manual contain methods and procedures for maintaining the aircraft weight and center of gravity within approved limits. Approved weight and balance control procedures are the only means for an operator/applicant to authorize the use of other than known weights for crew, passengers, baggage, or cargo. The weight and balance control program, including loading schedules and charts, are approved on operations specifications by the FAA. This program must be included in the operator/applicant's policies and procedures manual.

Section 121.189(c)(1) states, for turbine engine powered takeoff limitations, that "(c) No person operating a turbine engine powered category airplane certificated after August 29, 1959, may take off that airplane at a weight greater than that listed in the Airplane Flight Manual (AFM) at which compliance

stop data, it will have to flight test, simulate, or analytically prove accelerate-stop distance data to the FAA. This process could be expensive to the operators who would pay for the manufacturer's support.

This rulemaking does not require the affected airplanes that are currently in service or airplanes that will be manufactured under an existing type certificate to meet the engine-out climb gradient performance required by part 25. These airplanes will, however, be required to meet the obstacle clearance limitations of § 121.189(d)(2).

Section 121.189(d)(2) states for turbine engine powered takeoff limitations, that "(d) No person operating a turbine engine powered category airplane may take off that airplane at a weight greater than that listed in the Airplane Flight Manual—(2) In the case of an airplane certificated after September 30, 1958, that allows a net takeoff flight path that clears all obstacles either by a height of at least 35 feet vertically, or by at least 200 feet horizontally within the airport boundaries and by at least 300 feet horizontally after passing the boundaries." AFM's for some older airplanes with seating capacity of 10-to-19 passengers do not have data to show the required climb gradient or the certification basis to clear obstacles after takeoff with an engine-out at a specified weight. As one commenter suggests, additional certification requirements would have to be identified in part 121 or in a new Appendix to 121 for nontransport category airplanes, except for the commuter category or SFAR 41, ICAO Annex 8 airplanes, before these airplanes could comply with § 121.189(d)(2) requirements.

As with accelerate-stop data, the FAA agrees that new or additional performance obstacle clearance data for certain airplanes would need to be developed, and that this data would need to be approved by an FAA Aircraft Certification Office and incorporated into the Aircraft Flight Manual. Raytheon estimates that to provide obstacle clearance data, testing would have to be done on all Beech 99 models and the price per each airplane for the new performance data would be \$63,000 (\$53,000 for the Beech 1300). This cost must be incurred by the manufacturer and then passed on to all the operators.

The FAA recognizes the significant problems in developing the necessary performance data for airplanes type certificated under a wide range of standards over the past 30 years, including part 23 (or its predecessor, part 3 of the Civil Air Regulations) normal category, plus additional standards in the form of special conditions, SFAR 23, SFAR 41C, or part 135, appendix A, or part 23 commuter category. Development of the additional performance data for airplanes certificated under older standards may be developed by conducting actual flight tests, data analysis, or any other methods acceptable to the Aircraft Certification Office. The FAA believes that the performance requirements of § 121.189(d)(2), obstacle clearance with an engine-out after takeoff, contribute to an increased level of passenger and crew safety.

The FAA also understands that the requirements for accelerate-stop and obstruction clearance may, in fact, remove certain airplanes from service in part 121. It may also affect the operational capability of some operators, depending on the location and height of obstacles, and may terminate air carrier service to some communities if airplanes are removed from service.

Because of the difficulty that affected commuters would face in meeting the part 121 performance operating limitations with their existing fleet, the FAA has decided to provide delayed compliance for these requirements. Subpart I has been amended to state different requirements for aircraft used by affected commuters that were certificated under different certification standards, as follows:

1. Airplanes certificated under commuter category can meet all of the airplane performance requirements of part 121 within 15 months of the publication of the final rule.

2. Airplanes certificated under SFAR 41 or earlier certification standards will be allowed to continue to comply with the part 135 Subpart I and other airplane performance operating limitations requirements for 15 years. The FAA anticipates that some of the SFAR 41 airplanes will be able to meet the part 121 requirements within the 15-year period so they have the choice of either continuing to operate under the performance requirements of part 135 for the 15-year compliance period or complying with the performance requirements of part 121 during the 15-year compliance period. Some of the airplanes

new airplanes from manufacturers, they might experience a higher accident rate than 10 passengers. This airplane group is not covered by this rulemaking and has a higher accident rate than the 10-19 passenger airplanes. Therefore, an unintended effect of this rule could be an increase in the accident rate.

In response to Jet Stream's comment, current FAA policy prohibits revisions to airplanes certificated under SFAR 41 that would increase the maximum weight or the number of passengers. This SFAR was terminated on September 13, 1983.

While the FAA understands that some of the older airplanes (i.e., normal category predecessors of commuter category airplanes) may not be able to meet certain performance requirements, the FAA has determined that some performance requirements, such as the maintaining of an altitude with an engine-out, are important safety enhancements that provide for a higher level of safety. This level of safety required in part 121 should be available to all passengers flown on carriers operating under part 121.

Section 121.191 requires that the AFM show a one-engine inoperative net en route flight path which would provide a positive slope at an altitude of at least 1,000 feet above the terrain (2,000 feet in mountainous terrain) within 5 statute miles of the intended track. Section 121.191 also provides for a net flight path that would allow continued flight from the cruising altitude to an airport clearing all terrain and obstructions. Section 135.181(a)(2) requires airplanes to maintain a 50 feet per minute rate of climb when operating at the MEAs or 5,000 feet MSL whichever is higher. It does not provide for the continuation of the flight below the MEA.

Section 121.191 has continuously provided for safe engine out en route operations while allowing some flexibility. The flexibility allows the certificate holder to calculate maximum weights for maintaining a constant engine out altitude, a continuous flight path drift down to an airport when an altitude cannot be maintained, and provides off airways direct routing engine out performance requirements. The FAA understands that net en route flight path data must be provided by the manufacturer; however, the FAA believes that part 121 air carriers deserve the additional flexibility of § 121.191 and that commuters adopting the § 121.191 requirements may gain a flexible benefit with a continued higher level of safety.

In response to comments, the FAA points out that Notice 95-5 proposed to remove the words "transport category" wherever they appear in subpart I.

In reviewing part 121 to resolve comments, the FAA noted that several formulas are printed incorrectly. In the rate of climb formula for reciprocating engine powered transport category airplanes certificated under parts other than part 4a of the Civil Air Regulations (CAR), the parentheses are misplaced. This formula has been printed correctly in the corresponding part 135 section of § 135.371 (a) and (c)(1). Also, in the rate-of-climb formula for transport category airplanes certificated under CAR 4a [§ 121.181 (a) and (c)(1) and § 121.183 (a)(2) and (c)(1)] it is not clear as printed that the subscript s_0 is to be squared. Appropriate corrections are made to both formulas.

VI.A.6 Subpart J—Special Airworthiness Requirements

Internal doors. Section 121.217 prescribes that in any case where internal doors are equipped with louvers or other ventilating means, there must be a means convenient to the crew for closing the flow of air through the door when necessary.

Comments: Raytheon Aircraft states that a new toilet installation for the 1900D has internal partitions with permanently open louvers. Compliance with § 121.217 would require Raytheon to redesign the partition louvers so a crewmember could leave his or her station to close the louvers when necessary or design the louvers for remote control closure.

FAA Response: Contrary to the commenter's assumption, the lavatory partition louvers in the commenter's airplanes would not have to be redesigned. As stated in § 121.213 (a) and (b), § 121.217 applies only to airplanes type certificated under Aero Bulletin 7A or part 04 of the Civil Air Regulations.

for nontransport category airplanes type certificated after December 31, 1964.

Landing gear aural warning device. Section 121.289 contains a requirement for a landing gear aural warning device for large airplanes. At present this section applies to any airplane with a maximum certificated takeoff weight of more than 12,500 pounds. Appendix A of part 135 requires a landing gear warning device for airplanes having retractable landing gear and wing flaps, but the device need not be aural. The FAA considers that the cost of replacing a warning light with a warning sound would be minimal. Therefore, this section would apply to any airplane that presently operates under part 135 and that would be required by this final rule to operate under part 121. To allow adequate time for airplanes without aural warning devices to be retrofitted, the FAA proposed a compliance date of 2 years after the publication date of the final rule.

Comments: Raytheon comments that their models all provide aural landing gear warning.

AACA notes that the FAA did not prepare a cost analysis for this proposal, other than to show that the cost would be "minimal." AACA shows that various manufacturers' comments on similar proposals have identified substantial administrative, engineering, installation, and ongoing maintenance cost. However, AACA also notes that, in this case, Fairchild Aircraft believes that the landing gear aural warning can be installed without undue cost or difficulty.

AACA also states that once an item is installed, there are many other things that must be done that involve cost. Cost items identified are: revisions of the certificate holder's training program, normal and emergency procedures, maintenance MEL's and other items need to be amended to reflect the change from a visible lighted warning device to an aural device. According to AACA, compliance costs add up incrementally to substantial cumulative cost and that the FAA fails to account for.

FAA Response: Even though part 23 requires an "aural or equally effective device," the FAA is not aware of airplanes where the "equally effective device" was accepted as the only warning for the landing gear warning. The reason for not accepting such devices includes the consideration of pilot's work load during the landing phase of flight and the need for the warning to attract pilot attention under such conditions. No proposed lighted device, by itself, has been found acceptable to provide the needed warning for this flight condition. Therefore, the FAA is amending §121.289 as proposed to require installation of a landing gear aural warning device within 2 years of the publication of this final rule. However, the FAA believes that all affected airplanes already have an aural warning system.

Emergency evacuation and ditching demonstrations. Section 121.291 contains requirements for conducting demonstrations of airplane evacuation and ditching procedures. The FAA requires these demonstrations upon introduction of a new type and model of airplane into passenger-carrying operations. For airplanes with a seating capacity of more than 44 passengers, an actual evacuation demonstration must show that the full capacity of the airplane and the crewmembers can be evacuated within 90 seconds. Also, for airplanes with more than 44 passenger seats a partial demonstration is required under one of the circumstances described in §121.291(b). Demonstrations have not been required for airplanes with fewer than 44 passenger seats.

Under §121.291(d) any certificate holder operating or proposing to operate one or more landplanes of any size in extended overwater operations must conduct a simulated ditching in accordance with Appendix D to part 121. The purpose of the ditching demonstration is to show that the certificate holder's ditching training and procedures for a new type and model of airplane are satisfactory. The simulated ditching does not specifically require the use of flight attendants; the FAA proposed to apply this rule to any affected commuter operator who conducts extended overwater operations, whether or not flight attendants are used in the operation. The FAA proposed to apply this provision to the affected commuter operators only when a new type and model of airplane is introduced into the certificate holder's operations after the effective date of the final rule. This requirement does not apply to the current fleet.

to make the FAA's intent clear. The commenter also indicate the fact that a ditching demonstration would be required only if an airplane is a new make/model for a particular certificate holder's fleet.

FAA Response: Parts 25 and 121 currently require emergency evacuation demonstrations for transport category airplanes with more than 44 passenger seats. These demonstrations are required in addition to specific detail design requirements, e.g. aisle width, exit size, exit slides, etc., and are conducted to confirm the overall evacuation capability of the airplane. They are also conducted to show the adequacy of the operator's evacuation procedures. Considering the specific detail design requirements with which transport category airplanes must also comply, the FAA has not found it necessary to require such evacuation demonstrations for airplanes having 44 or fewer passenger seats. Since part 135 does not pertain to operations with airplanes having more than 44 passenger seats, there has been no need to require an emergency evacuation demonstration in that part. Part 23, on the other hand, does not contain the same specific detail design requirements for commuter or predecessor normal category airplanes. Therefore, an evacuation demonstration is required for type certification of those airplanes in lieu of the specific detail design requirements that transport category airplanes must meet. There will be no reduction in safety because transport category airplanes will still be required to comply with the same specific detail design requirements and the part 23 requirement for an evacuation demonstration will remain unchanged. As proposed, § 121.291(b) is amended to make clear that it, as well as § 121.291(a), only applies to airplanes with more than 44 passenger seats.

The FAA agrees that the language in § 121.291(d) for the ditching requirement does not clearly state that it applies to the affected commuters only if an airplane is a new type and model introduced after they began operations under part 121. Therefore, clarifying language is added to § 121.291(d).

New special airworthiness requirements (retrofit) and requirements applicable to future manufactured airplanes:

- *Ditching emergency exits.* Section 25.807(e) contains requirements for ditching emergency exits in transport category airplanes. The ditching exits for transport category airplanes with 10 or more passenger seats must meet at least the dimensions of a Type III passenger emergency exit (20 inches wide by 36 inches high). It should be noted that transport category airplanes are required to have ditching exits meeting those criteria regardless of whether the airplane is approved for ditching and used in extended overwater operations. If ditching approval is requested by the applicant, it also must be shown that the required life rafts can be launched successfully through the ditching emergency exits.

Part 23, as recently amended by Amendment 23-46 (59 FR 25772; May 17, 1994), now contains requirements for ditching exits; however, all of the normal or commuter category airplanes currently in service were type certificated before that amendment became effective. The FAA proposed to amend part 121 (proposed new § 121.293(a)) to require ditching exits for nontransport category airplanes type certificated after December 31, 1964. Unlike those required for transport category airplanes, the ditching exits would only have to be as large as those currently required by § 23.807(b) (19 inch by 26 inch ellipses). The FAA proposed that compliance would be required 2 years after the publication date of the final rule. The proposed requirement would not entail adding new exits. The overwing exits of most airplanes type certificated under part 23 would probably qualify as ditching exits. Part 25 airplanes intended for non-part 121 transportation sometimes comply by providing a sheet metal dam that can be installed in the passenger entry doorway. If it is necessary to consider a floor-level exit as a ditching exit in a nontransport category airplane, a similar sheet metal dam could be provided.

Comments: Commuter Air Technology, a modifier of business airplanes for commuter airline service, states that its product has overwing exits that would be usable anytime the airplane was floating. The commenter questions whether it would be necessary to conduct a \$5,000 type certification effort to qualify those exits as ditching emergency exits. NATA, an association representing certificate holders of 10- to 19-passenger-seat airplanes, recommends rescinding the proposal and asserts that the cost of compliance

airplane models. These are the low-wing models, there are also three high-wing normal or commuter category of the high-wing models, and the Dornier 228 and Britten Norman BN-2A Mk III Trislanders. (This, of course, refers to landplanes. Many Twin Otters operate as seaplanes on floats.) Typically, high-wing landplanes come to rest in the water on the fuselage with one wing tip in the water.

The DHC-6 Series 100 and 200 airplanes have emergency exits in the top of the fuselage forward of the wing. These exits also meet the ditching emergency exit requirements. The DHC-6 Series 300 airplanes do not have such overhead exits; instead they depend entirely on the emergency exits in the sides of the fuselage. In almost three decades of service with Twin Otters, there have been two ditchings. One involving a Series 100 airplane occurred in the Pacific Ocean during a ferry flight from Long Beach, California, to Honolulu, Hawaii. Another, involving a Series 300, occurred in the Arctic. In both instances, all occupants were evacuated safely. In the latter case, the occupants escaped through the exits on the highest side. The FAA is not aware of any ditchings of Trislanders or Dornier 228 airplanes; however, because the Dornier 228 and the Trislander are so similar in design to the DHC-6, it is likely that they would float the same way that the Series 300 airplane did, and that their exits would also meet the ditching emergency exit requirements.

Most of the part 23 commuter and predecessor normal category airplanes are low-wing airplanes with overwing exits that would comply with no further substantiation required. The vast majority of the airplanes would, therefore, not be affected by the requirement in regard to either cost or safety benefit because they already comply. In view of the successful ditchings that have occurred with high wing airplanes to date, the FAA has decided not to adopt § 121.293(a) as proposed.

- *Takeoff warning system.* Section 25.703 requires an aural warning to the flightcrew at the beginning of the takeoff roll when the wing flaps, leading edge devices, wing spoilers, speed brakes, and longitudinal trim devices are not in a position that would allow a safe takeoff. Part 23 does not require a takeoff warning system (although a requirement for such a system is proposed in Notice No. 94-21, 59 FR 37620, July 22, 1994); in addition, part 23 airplanes typically do not have multiple types of devices. Accidents have occurred on transport category airplanes when the flightcrews initiated takeoffs when the airplanes were not in the proper configurations for takeoff. The FAA proposed that airplanes manufactured after a date 4 years after the publication date of the final rule would be required to have a takeoff warning system as required by § 25.703. However, a warning system is not required for any device for which it can be demonstrated that takeoff with that device in the most adverse position would not create a hazardous condition (§ 121.293(b)).

Comments: One commenter notes that a takeoff warning would not be required under § 25.703 if it is demonstrated that a takeoff with that device in the most adverse position would not create a hazardous condition. This commenter questions how one can measure the effect of these improper settings when compounded by other unfavorable conditions, such as weight and balance mistakes, but does not express support or opposition to the proposal.

Commuter Air Technology discusses the longitudinal trim and flap systems on its airplanes. The commenter notes that the pilot can visually verify that the flaps are in correct 40° takeoff setting from the cockpit. The commenter also states that the longitudinal trim is manual and has center marking visible from both the pilot and co-pilot positions. The commenter's position is that the additional cost of such a system is not warranted.

FAA Response: The first commenter correctly notes that a takeoff warning system is not required for any devices if it is demonstrated that takeoffs with that device in the most adverse position would not cause an unsafe condition. While the FAA agrees that with some airplanes it is possible to verify visually flap positions and manual trims and that there is a cost to install warnings, the FAA has determined that for safety reasons, an aural warning is needed under the conditions described.

C. The requirements are in addition to the airplane and equipment requirements of part 91. The discussion below emphasizes all new or revised equipment requirements except for major equipment such as FDR's and airborne weather radar, which are previously discussed in the "Major Issues" section of this document.

Notice 95-5 proposed to require that commuter operators comply with part 121 airplane and equipment requirements except in areas that were specifically discussed.

Sections 121.303, 121.305, and 121.307 require certain airplane instruments and equipment. Some of the part 121 equipment is required under part 135 only for IFR, VFR over-the-top, and VFR night operations. Most of the airplanes used by affected commuters already have these instruments as well as equipment required under part 135 (§§ 135.143 and 135.149). Under the proposal this equipment in these part 121 sections would be required for all part 121 operations.

Third Attitude Indicators. Section 121.305(j) currently requires a third attitude indicator on large turbojet-powered and large turboprop powered airplanes. Notice 95-5 proposed to apply this requirement to airplanes that would be operating under part 121 as a result of this rulemaking.

Comments: Most of the commenters on this issue oppose the requirement, primarily because of the cost.

According to RAA, part 121 does not include an equivalent to § 135.163(h), which requires dual attitude indicators which are powered by two different and independent power sources for nontransport category airplanes. RAA recommends requiring the third attitude indicator only for new production large airplanes, deleting the proposed retrofit requirement, and incorporating § 135.163(h) into part 121 for nontransport category airplanes. RAA also recommends considering an equivalent means of compliance for large nontransport category airplanes, such as "Situation Awareness for Safety" devices.

Raytheon Aircraft and Mesa state that the requirement is excessive for airplanes that already have two attitude indicators, each supplied by a separate source of power. Raytheon and Big Sky are concerned that the requirement might necessitate a redesign of the instrument panel.

Twin Otter International believes the requirement would be extremely costly with little safety benefit. According to Twin Otter, even if the attitude indicator were lost, the airplane would have adequate performance and information to be operated without a third attitude indicator.

Commuter Air Technology concurs with the proposal for all aircraft operated under part 121 and points out that § 135.149 currently requires a third indicator only for turbojet aircraft.

United Express states that the FAA supporting data for a third (independently powered) attitude gyro is based on turbojet accident/incident research and not on turbopropeller accident/incident data. According to the commenter, until the FAA can substantiate that this will prevent accident recurrence in turbopropeller aircraft, it should not be required. The commenter states that some aircraft, such as the commenter's fleet of Jetstream turboprops, have a third attitude gyro powered by the aircraft battery system. No information has been provided, that the commenter is aware of, suggesting that an independent power source will improve safety or accident statistics in turbopropeller aircraft.

FAA Response: Section 121.305(j) currently requires a third attitude indicator on large turbojet-powered and large turboprop-powered airplanes. Part 135 requires a third attitude indicator only for turbojet powered airplanes.

The FAA's intent as stated in Notice 95-5 was to require all affected airplanes to comply with the equipment requirements of § 121.305 including the requirement for a third attitude indicator. The notice did not contain amendatory language to § 121.305(j); however, to be consistent with the FAA's stated intent, the rule language has been developed to include the intended airplanes and to provide a compliance date.

configuration of 10 to 30 seats that were manufactured before 15 months after the date of publication of this final rule. In effect, this allows operators to decide whether to retrofit these airplanes or phase them out. Turbojet airplanes and newly manufactured turboprop airplanes must comply within 15 months.

Lavatory fire protection. Section 121.308 currently requires lavatory smoke detection systems, or equivalent, and automatically discharging fire extinguishers in lavatory receptacles for towels, paper, or waste for passenger-carrying transport category airplanes. The FAA proposed to apply the requirements of § 121.308 to airplanes formerly operated under part 135 that are equipped with lavatories. Section 121.308 would be amended to delete the references to transport category. The proposed compliance section, § 121.2, required that lavatory protection equipment be installed within 2 years after the publication date of the final rule.

Comments: ALPA believes that the FAA should require installation of the smoke detection system within 6 months of the effective date rather than 1 year as proposed. This commenter also believes that installation of the lavatory fire suppression system should be required in all airplanes newly manufactured within 1 year of the effective date rather than 2 years as proposed.

ASA and RAA do not object to compliance insofar as new airplanes are concerned, but do suggest that the requirement be deleted as a retrofit requirement. These two commenters state that the industry estimated cost of compliance is \$2,500 per airplane while Jetstream estimates \$4,000 per airplane.

Comair believes compliance would amount to \$2,500 and 20 pounds per airplane. The commenter asserts that compliance is not justified for airplanes with 20 to 30 passenger seats due to the small size of the cabin, proximity of a trained flight attendant with a portable fire extinguisher, and the present smoking ban on domestic flights.

Commuter Air Technology asks whether the proposed requirement would apply to some of their products that have a side facing toilet separated from the cabin only by a curtain.

Jetstream states that there is no evidence to support the introduction of fire suppression of toilet receptacles on commuter aircraft. According to the commenter, the lavatory receptacles are already designed to contain a fire within the compartment; and, due to the small cabin size of those airplanes, the lavatory is readily accessible to the crew if the need to suppress a fire does occur. The commenter estimates a cost of \$4,000 per airplane. Nevertheless, the commenter does support requiring new aircraft to comply.

FAA Response: The FAA does not agree with the commenter's suggestion that installation of smoke detectors should be done within 6 months and fire extinguishers within 1 year of the publication of the final rule. This would not allow sufficient time for compliance.

The comments received do not contradict the FAA's understanding that few, if any, of the airplanes with 10 to 19 passenger seats are equipped with lavatories. The primary impact of the proposed requirement for lavatory smoke detection and fire extinguishment, therefore, would be on airplanes with 20 to 30 passenger seats presently operated under part 135. (Any such airplanes currently operated under part 121 are already required to comply.)

Contrary to one commenter's belief, the present smoking ban on domestic flights does not eliminate the need for lavatory smoke detection and fire extinguishment. On the contrary, the smoking ban could increase the temptation for some passengers to smoke illicitly in the lavatory and thereby increase the possibility of a fire originating in that compartment. The presence of a smoke detector serves as a deterrent to illicit smoking as well as a means of warning when it does occur.

Contrary to the commenter's belief, the presence of a flight attendant in the cabin would not compensate for the lack of a lavatory smoke detector and fire extinguisher. A lavatory is designed with an effective ventilation system to preclude normal odors from entering the cabin. In the absence of a smoke detector, the ventilation systems also precludes early detection of illicit smoking or a fire by persons in the cabin. In addition, the materials typically contained in the waste receptacles are highly flammable and

Therefore, because the adverse service experience that prompted the adoption of § 121.309(c)(7) is equally to any airplane, large or small, with a lavatory and because the commenters' cost estimates are obviously based on a misunderstanding of the required smoke detector qualification, the FAA is adopting this requirement in substance as proposed. The final rule has been revised to provide operators 2 years from the date of publication to comply with the lavatory smoke detector system and fire extinguisher requirements. In addition, the rule states that operators of 10- to 19-seat airplanes that have a lavatory must have a smoke detector system or equivalent that provides either a warning light in the cockpit or an audio warning that can be readily heard by the flightcrew. This will accommodate airplanes that do not have flight attendants.

Emergency equipment inspection. Section 121.309(b) requires that each item of emergency and flotation equipment must be inspected regularly in accordance with inspection periods established in the operations specifications to ensure its condition for continued serviceability and immediate readiness to perform its intended emergency purpose. Section 135.177(b) contains a similar requirement for part 135 operators of airplanes with more than 19 seats. In this section, the FAA proposed requiring affected commuter operations, including those with airplanes of 10 to 19 seats, to comply with the existing part 121 requirement. Other provisions in the proposal would require affected commuters to install additional emergency equipment. No comments were received on this issue and the final rule is adopted as proposed.

Hand-held fire extinguishers. Sections 121.309(c) and 135.155 contain similar requirements for hand-held fire extinguishers aboard airplanes. Part 121 requires at least two of the fire extinguishers to contain Halon, or an equivalent, and mandates placement of the fire extinguishers, while part 135 does not. In Notice 95-5, the FAA proposed that affected commuters comply with the part 121 requirements for fire extinguishers and that § 121.309(c)(7) be amended to require that at least one of the fire extinguishers in the passenger compartment contain Halon or the equivalent. No comments were received on this issue and the final rule is adopted as proposed.

First aid kits and medical kits. Section 121.309(d) requires that both approved first aid kits and approved emergency medical kits be carried on board passenger-carrying airplanes. The medical kits are intended to be used only by medically qualified persons, such as doctors, who may be on board the airplane. Section 135.177(a)(1) requires first aid kits to be carried on board airplanes with more than 19 passengers.

The FAA proposed that first aid kits be required for all airplanes with more than 9 passenger seats operating under part 121 and medical kits be required for airplanes that are required to have a flight attendant. The FAA stated in Notice 95-5 that, after review of the comments, the FAA might decide to require a medical kit for all 10-19 seat airplanes.

In Notice 95-5 the FAA pointed out that affected commuters would have to comply with a recent rule requiring disposable latex gloves for first aid kits and medical kits.

Comments: Six commenters disagree with the proposed requirement to have first aid kits on 10- to 19-seat airplanes. Most of the commenters cite lack of space and the lack of necessity for the equipment. Commenters believe that the first aid kit would not provide enough of a medical benefit to justify its cost. Two of these commenters oppose the addition of latex gloves as part of the first aid kit. One commenter believes that the equipment would place additional liability on employees. One commenter concurs with both proposed requirements.

Two commenters provide additional cost information for first aid kits. One of the commenters estimates \$1,500 per airplane and the other estimates \$1,500 without specifying the number of entities involved (i.e., airplane(s) or fleet).

AACA agrees with the requirement for first aid kits on all commuter airplanes whether a flight attendant is available or not. According to the commenter, regardless of the size of the airplane, inflight emergencies could occur and a first aid kit may be needed. In the absence of a flight attendant, a crewmember or passenger could use the first aid kit. The commenter also estimates costs of \$4,359

However, the cost estimate is not supported by any documentation.

FAA Response: The FAA maintains that certain of these requirements are necessary to enhance safety. The ability to respond in the early stages of a medical emergency is critical and could save lives in the event of an in-flight injury or an accident. Additionally, the FAA maintains that latex gloves as were required by a 1994 rule change (59 FR 55208, November 4, 1994) should be included in these first aid kits because they guard against transmission of disease through spilled blood. In sum, no commenter provides any compelling reason to eliminate the first aid kit requirement, especially considering that these airplanes often operate in remote areas where medical assistance may not be available. The FAA has determined that emergency medical kits will be required for airplanes requiring a flight attendant. For airplanes not having a flight attendant, requiring a medical kit poses problems, such as a lack of security, no one to monitor the use of the kit, and no one to check the credentials of a person who professes to be a doctor and able to administer the medical treatment.

The regulations allow flexibility in the location and mounting methods of kits. Depending on the weight of the kit and Velcro surface area, Velcro may be sufficient. Even if Velcro is not practical in a particular instance, other low-cost alternatives, such as leather straps with buckles, are acceptable.

Crash ax. Section 121.309(e) requires that each airplane be equipped with a crash ax, while § 135.177 requires a crash ax for airplanes with a passenger seating configuration of more than 19 passengers. Under part 135 the crash ax is to be accessible to the crew but inaccessible to the passengers during normal operations. The FAA proposed in § 121.309(e) to require a crash ax for each airplane that has a flight deck separate from the passenger cabin and a lockable door.

Comments: One commenter disagrees with the FAA assertion in Notice 95-5 that the crash ax is useful only for egress from the flight deck to the cabin in the event of an emergency. The commenter says that the Airplane Flight Manual of one popular 19-seat commuter airplane suggests that preparation for certain gear-up landings include opening an overwing exit inflight, because even relatively minor distortion of the fuselage in a small airplane can render exits unusable. Thus, the crash ax could be used for prying open an exit.

Raytheon states that if a key lock is required as proposed on lockable doors in 10- to 19-seat airplanes, then a crash ax would be required. The commenter states that removal of the door would eliminate the requirements for a lock and a crash ax.

A third commenter supports the proposal as written in Notice 95-5 to require a crash ax only in airplanes that have a separate flight deck with a lockable door.

FAA Response: The primary purpose in requiring that a crash ax be carried is to allow emergency egress after an accident if airplane exits are unusable. However, the FAA agrees with commenters that there could be other uses for the ax including egress of the cockpit crew.

After considering the comments and reviewing the proposed requirement, the FAA has determined not to require crash axes on nontransport category airplanes type certificated after December 31, 1964, primarily because these airplanes are not required to have a lockable door. The FAA has determined that the lockable doors that exist in nontransport category airplanes type certificated after December 31, 1964, are frangible and obviate the need for a crash ax on the flight deck. Also carrying a crash ax in these airplanes creates a security risk since the ax would not be inaccessible to passengers.

Emergency evacuation lighting and marking requirements. Section 121.310(c), by referencing § 25.812(e), requires emergency evacuation lighting for passengers when all sources of illumination more than 4 feet above the floor are totally obscured. This requirement applies to all transport category airplanes regardless of how many passenger seats they have. There is no corresponding requirement in part 23 or in part 135 for airplanes having a passenger-seating configuration of less than 20 seats.

Section 121.310(d) for emergency light operation requires that each light required by paragraphs (c) and (h) must be operable manually and must operate automatically from the independent lighting

transport category airplanes. The FAA proposed to amend § 121.310(f) to exclude nontransport category airplanes.

Section 121.310(g) (and its parallel requirement in § 135.178(g) for more than 19 passenger seat airplanes) requires emergency exits to be marked on the outside by a 2-inch band contrasting in color with the surrounding fuselage. Most airplanes with a passenger-seating configuration of less than 20 seats operating under part 135 are already required to meet this requirement and, for those that do not, compliance with this requirement as proposed would merely require painting the bands around each exit.

Section 121.310(h) requires airplanes for which the application for type certification was made before May 1, 1972, to meet the exterior emergency lighting standards of § 25.812, in effect on April 30, 1972, or any later standards in effect if the application for type certification was made later. The FAA proposed to require nontransport category airplanes type certificated after December 31, 1964, (i.e., part 23 normal and utility category) to comply with § 25.812 in effect April 30, 1972, within 2 years after the publication date of a final rule.

The FAA proposed that airplanes with a passenger-seating configuration of less than 20 seats previously operated under part 135 be required to comply with the above-described emergency lighting systems (that is, emergency exit signs, interior lighting, exit handles, and exterior lighting) and, except for the marking requirement discussed above, proposed a compliance date 2 years after the publication date of a final rule.

Comments: Sixteen comments were received on proposed § 121.310. All commenters oppose the proposal to retroactively require any additional emergency exit signs or emergency lighting on 10-to-19 passenger seat commuter airplanes.

Several commenters state that the cost of retrofitting in-service airplanes with an emergency lighting system would be much more expensive than the FAA expected when the notice was prepared.

Six commenters note the size of the cabin area of these airplanes and that no person is seated more than 8 feet (or two or three rows) from an exit. One of these six also notes that no person is more than 12 feet from two exits.

Four commenters note that an emergency evacuation demonstration is required for the certification of commuter category airplanes and that these demonstrations have shown that the airplanes can be evacuated, under conditions of total darkness, in less than 90 seconds. Two other commenters note that there is no known service history or adverse accident data related to commuter operations to support the need for this proposal. Therefore, all six of these commenters believe there is no justification for the proposal and each of them recommends that it be withdrawn.

One commenter believes that the current briefing on exit locations and their use is sufficient and that no further action is needed. Two commenters believe that the requirement in § 121.310(c)(3) to show compliance with § 25.812(e) does not add any safety to these airplanes. They point out that the height of the ceiling in their airplane is only 4¾ feet high and question the need to comply with the provision of § 121.310, which requires compliance with § 25.812(e). Section 25.812(e) requires escape path markings for passenger guidance, "when all sources of illumination more than four feet above the cabin aisle floor are totally obscured." According to commenters, with a ceiling height of only 4¾ feet, it is likely that the required exit markings are located less than 4 feet above the floor and that compliance with § 121.310(c)(3) is not necessary. Another commenter believes that the requirement in § 25.812 for emergency lighting to operate for 10 minutes is not needed for these airplanes. The commenter points out that the required emergency evacuation time for these airplanes is much less than 10 minutes and that this requirement should be adjusted accordingly. One other commenter suggests that flashlights be made available. Finally, two commenters acknowledge that emergency lighting may enhance safety; however, they also believe that this enhancement in safety can be provided by a lighting

The only other comment received concerning this issue was from an individual who requests resolution of the issue of whether the 2-inch wide contrasting band has to be on the fuselage surrounding the emergency exit or on the exit itself.

FAA Response: Section 23.803 does require an emergency evacuation demonstration, as noted by the commenters; however, the demonstration is required primarily to compensate for the differences in evacuation design features (e.g. aisle width, exit size, etc.) required by part 23 and those of part 25. Like the demonstrations required by part 25 for airplanes with more than 44 passengers, the demonstrations are intended to evaluate the evacuation capability of the airplane under standard conditions and are not intended to show the evacuation capability of the airplane under the most adverse condition that could be encountered. They are not intended, for example, to demonstrate the evacuation capability of the airplane when there is dense smoke in the cabin or when there is hazardous, damaged structure in the vicinity. The applicability of the required evacuation demonstrations to the need for emergency lighting is therefore limited.

Passengers must egress rapidly in the event of fire. Contrary to the commenters' assertions concerning a lack of adverse service experience, the FAA is aware of at least six instances since 1980 in which passengers had to be evacuated because of fire from such nontransport category airplanes or transport category airplanes with cabins of similar size. There is no doubt that safety can be enhanced considerably by requiring compliance with the emergency lighting requirements proposed in Notice 95-5. Nevertheless, the installation of such lighting is very costly.

In response to excluding smaller airplanes from the requirements pertaining to access to exits, § 121.310(f)(2) states, in part, that there must be enough space next to each Type I or Type II emergency exit to allow a crewmember to assist in the evacuation of passengers without reducing the unobstructed width of the passageway below that required (20 inches wide). Part 135 contains the same requirement for airplanes having a passenger seating capacity of more than 19 seats.

Since the commenter's product has more than 19 passenger seats and numerous examples are already in service in this country, the airplanes have presumably been shown to comply with either § 135.178(f)(2) or the identical text of § 121.310(f)(2). Thus, this rulemaking would not impose any new burden on airplanes with more than 19 passenger seats.

Section 121.310(g) states that exterior exit markings "must be a 2-inch wide colored band outlining each passenger exit on the side of the fuselage." Since the band is outlining the exit it would be on the fuselage, not on the exit.

After reviewing the costs and benefits associated with the proposed emergency lighting requirements, the FAA has decided to revise the final rule as follows:

1. The floor proximity lighting requirements in § 121.310(c) will apply to all airplanes except nontransport category airplanes type certificated after December 31, 1964. In effect, this is not a change from current requirements. Affected airplanes with 10 to 19 passenger seats will not have to comply because of the small cabin size, the probability that passengers would be able to find the emergency exits without floor lighting, and the high cost of retrofitting for these requirements.

2. The interior light operation requirements of § 121.310(d) do not apply in the final rule to nontransport category airplanes certificated after December 31, 1964, since the requirements of § 121.310 (c) and (h) apply only to transport category airplanes.

3. The requirement for an illuminated exit operating handle (§ 121.310(e)) remains as proposed. The compliance date for retrofit requirements for 10- to 19-seat airplanes is 2 years after publication of the final rule.

4. Section 121.310(f) was proposed to apply to airplanes with a passenger-seating configuration of more than 19 seats. This remains in the final rule.

in a 19-seat airplane, especially during landing.

FAA Response: The FAA intended for those flights with flight attendants to be operated in accordance with the current § 121.311. For these flights on nontransport airplanes type certificated after December 31, 1964, the FAA has included wording to clarify that the pilot must only instruct the passengers to place their seatbacks in the upright position. The final rule has also been revised to add a new subparagraph to § 121.311(e) that provides that on an airplane with no flight attendant, the certificate holder may take off or land as long as the flightcrew instructs each passenger to place his or her seatback in the upright position. This change is needed to clarify what is required for airplanes that do not have a flight attendant.

Seat belt and shoulder harnesses on the flight deck. Section 121.311(f) requires a combined seat belt and shoulder harness with a single-point release that meets the requirements of § 25.785. Part 135 does not contain a requirement for a single-point release system although the FAA believes that virtually all commuter category airplanes being manufactured today have such a system. To ensure that this is the case for newly manufactured airplanes, the FAA proposed in § 121.2(e)(1) to require that airplanes manufactured after 1 year after publication of the final rule meet the requirements of § 121.311(f).

Comments: One commenter concurs with the proposal.

FAA Response: The final rule remains substantively as proposed, except that compliance is within 15 months after publication of the final rule. However, to clarify that § 121.311(f) applies to newly manufactured nontransport category airplanes, appropriate language is added to that paragraph.

The final rule also revises § 121.311(h) to allow crewmembers for affected commuters to release the shoulder harness if they cannot perform their duties otherwise.

Interior materials and passenger seat cushion flammability. Section 25.853(b) was amended in 1984 to require seat cushions to meet greatly enhanced flammability standards. At the same time, §§ 121.312(b) and 135.169(a) (but not for commuter category airplanes) were amended to require airplanes already in service to meet the improved seat cushion flammability standards after November 1987. In the years that have passed since that date, the improved cushions are credited with saving a number of passengers' lives.

The FAA proposed to require nontransport category airplanes type certificated after December 31, 1964, to comply with the same seat cushion flammability standards that apply to other airplanes operated under part 121. The proposed compliance date was 2 years after the publication date of the final rule or on the first replacement of the cushions, whichever occurs first. The proposed rule also allowed for granting deviations for up to 2 additional years when justified by unique integral-seat cushion configurations.

The FAA also proposed that the interior components of nontransport category airplanes manufactured after 4 years or more after the publication date of the final rule must meet the same standards that those components must meet when installed in transport category airplanes with 19 or fewer passenger seats. Those standards, which involve testing with Bunsen burners, are not to be confused with the Ohio State University (OSU) radiant rate of heat release testing required for large-surface-area components installed in airplanes with 20 or more passenger seats. (See proposed § 121.2(e)(2)(ii).)

Comments: ALPA supports the proposed retroactive requirements, including this proposal.

Fairchild and AIA present identically worded statements opposing the proposed requirement that seat cushions would have to comply with the flammability standards of §§ 25.853(b) and 121.312(b). In that regard, they state that they know of no evidence that compliance would provide a significant safety benefit in 10 to 19 passenger airplanes. They do not believe that compliance would delay the spread of a fire enough to be an important factor in survival. In that regard, they note that the seats in smaller airplanes tend to be lightweight and offer relatively little mass of material to fuel a fire. Also, they

Big Sky Airlines and RAA suggest that the compliance period should be extended to enable replacement during the routine seat replacement cycle. One of these commenters quotes a compliance cost of \$30,000 for each 19 passenger airplane.

Mesa does not express support or opposition to the proposal, but states that compliance would entail \$12,000, 36 pounds, and 10 hours for a Beech 1900C, or \$3,400, 38 pounds, and 10 hours for either a Beech 1900D or Jetstream 3100.

No comments were received concerning the proposal to require commuter category airplanes produced four years or more after the effective date to comply with the Bunsen burner test of part 25 (§ 25.853(a)). One commenter states that the installation of interior materials complying with § 25.853(c) would not improve the level of safety of airplanes with 10 to 19 passenger seats.

FAA Response: The commenters focus on the cost of compliance and the lack of a need for added fire protection in smaller airplanes.

In regard to costs, the commenters appear to have a misconception concerning the scope of the rulemaking. The costs fall into one of two categories—the cost of developing and testing suitable cushion materials and the actual cost of replacing individual seat cushions. In regard to the former, § 25.853(c) does not require each seat cushion to be tested, nor does it require each seat cushion design to be tested. Instead it simply states that each cushion must meet the flammability standards. An applicant has the option of utilizing a seat cushion material that meets the flammability standards; however, most choose to comply by using a covering material that protects the cushion from the fire. (The latter are usually referred to as “fire-blocked seats.”) Individual seat cushions or individual seat cushion designs do not have to be tested if they can be shown to meet those standards by similarity to other cushions that have been tested previously and found to meet the standards. Advisory Circular (AC) 25.853-1, Flammability Requirements for Aircraft Cushions, issued September 17, 1986, provides guidance in that regard. In the years that have passed since transport category airplanes used in part 121 or 135 service were first required to comply, many different possible seat cushion designs have already been tested and found satisfactory. It is, therefore, quite possible to utilize a seat cushion material or fire-blocking material that has already been shown to comply with the flammability standards. In that regard, many of the affected airlines are affiliated with major airlines and have ready access to the same means of compliance adopted several years earlier by those major airlines.

Contrary to some commenters’ beliefs, the use of seat cushions meeting these flammability standards is quite effective in the cabins of smaller airplanes. Some commenters note that the amount of cushion material is relatively small in 10- to 19-passenger airplanes. While the amount of cushion material in those airplanes is obviously much less than that in larger airplanes, it represents approximately the same portion of the total flammable material in those airplanes as in the larger airplanes. In addition to representing a large portion of the materials in the cabin that are flammable, the foam materials typically used for seat cushions are, by far, the most flammable of all the materials used in the cabin. A secondary, but no less significant, benefit is that cushions meeting these flammability standards are much less likely to ignite and sustain a flame than those that do not meet the standard. Precluding a fire from occurring is obviously the best possible form of fire protection.

The FAA conducted a series of 12 full-scale fire tests at its Technical Center at Atlantic City, New Jersey, using the fuselage of a Metroliner. The cabin of the Metroliner is typical of those of the part 23 Normal or Commuter Category airplanes with 10 to 19 passenger seats. Under the test conditions, it was shown that using seat cushions meeting these flammability standards, in lieu of the flammability standards that would otherwise be applicable, would afford passengers approximately 45 additional seconds in which to escape.

The primary benefit of having seat cushions that meet these flammability standards is to afford occupants more time in which to egress in a post-crash fire situation; however, such cushions also provide additional protection should an inflight cabin fire occur. Contrary to the beliefs of commenters in that

normal wear replacement cycles. Since compliance can be achieved whenever the seat cushions or seat coverings are being replaced due to normal wear, the cost of compliance for each seat is just the additional cost of including the fire-blocking layer along with the covering.

Based on the above, the FAA has decided to adopt the seat cushion flammability standards of § 121.312(c), but to allow a compliance period of 15 years after the publication date of this rule. The FAA felt that the immediate cost of this retrofit would have negatively affected the industry. By allowing up to 15 years, it should be possible for all replacements to be scheduled within normal replacement cycles. An additional benefit of a 15-year compliance period is that certificate holders can coordinate their compliance with this section with their plans for meeting other extended compliance times, i.e., meeting the performance and accelerate-stop requirements and installation of a third attitude indicator.

As noted above, the FAA also proposed that the interior components of nontransport category airplanes newly manufactured 4 years or more after the publication date of the final rule must meet the same standards that those components must meet when installed in transport category airplanes with 19 or fewer passenger seats (i.e. Bunsen burner testing). After reviewing the present requirements, the FAA determined that the interior components of those airplanes are already required to meet the same flammability standards for type certification. Since the standards are identical, it is not necessary to specify the flammability standards as an additional requirement for newly manufactured airplanes. Section 121.312(a) has been amended in the final rule to clarify the applicability of the flammability standards to nontransport category airplanes used by affected commuters.

Section 121.312 provides the interior material flammability standards for airplanes operated under that part. As described above, the substantive provisions of that section are being retained, and the provisions applicable to airplanes being brought over from part 135 are being incorporated. In this final rule, § 121.312 is reorganized to highlight the applicable provisions and to provide greater clarity; the appropriate substantive text has been retained. Furthermore, appendix L is being added to part 121 to explain the regulatory citations for the part 25 provisions that have been superseded. Although those standards are not current insofar as new type certification under part 25 is concerned, they are referenced in part 121 and remain applicable for compliance. The addition of appendix L only clarifies existing requirements; therefore, it is adopted without prior notice and comment.

Miscellaneous Equipment. Notice 95-5 specifically discussed the proposal that would require affected commuters to comply with the miscellaneous equipment requirements of § 121.313(f) and (g). However, although not specifically discussed in Notice 95-5, § 121.313(c) pertaining to a power supply and distributive system would also be required.

Comments: Fairchild Aircraft notes that § 121.313(c) requires a power supply and distribution system that meets the requirements of six sections of part 25. Because § 121.313(c) does not assign an effective date to this list of part 25 sections, Fairchild assumes that it is the current version of each section that would be applicable. Fairchild also questions whether all airplanes currently operated under part 121 meet the current standards of part 25. Based on their assumption that their airplanes would have to meet current sections of part 25 and the fact that SFAR 23 and SFAR 41 airplanes do not meet those requirements, Fairchild proposes amending § 121.313(c) to except nontransport category airplanes type certificated after December 31, 1964, from this requirement.

FAA Response: The commenter has correctly identified the sections of part 25 that are listed in § 121.313(c); however, the commenter has apparently overlooked the alternative provisions contained in that section. In part, § 121.313(c) also reads: "or that is able to produce and distribute the load for the required instruments and equipment. . . ." This additional text of § 121.313(c) allows the use of a power supply and distribution system that performs this function regardless of whether it complies with the listed sections of part 25. The commenter's proposed amendment is not needed because § 121.313(c) already includes provisions for alternate means of compliance. The commenter's products have already been shown to comply with this alternative.

a cockpit key that is readily available to each crewmember. Accordingly, the language of § 121.313(f) was changed to except nontransport category airplanes certificated after December 31, 1964, without a door. Transport category airplanes already are required to have a door and a lock with a key.

Comments: Most of the comments received on this issue oppose the requirement for a locking cockpit door and key. Several commenters say that the cockpit door on EMB-120 airplanes cannot be locked when the observer jumpseat is in use. These commenters are concerned that strict adherence to the wording of the rule would require them to retrofit the door, redesign the cabin, and probably remove a revenue seat, all at a high cost. These commenters recommend that the EMB-120 be exempted from the requirement when the observer jump seat is in use. One commenter states that some nontransport category aircraft that will transition to part 121 do not have a cockpit door lock and key and may not be able to install one. One commenter states that operators will be required to obtain a supplemental type certificate to retrofit airplane doors with key locks. Another commenter states that this requirement would force operators to choose between removing the high-quality cockpit door installed at great expense on BE 1900D aircraft which provides protection from cabin illumination glare during night operations, or installing and using a lock on this door, both of which are contrary to safety. One commenter states that the 1900C and 1900D airplanes have frangible doors between the cockpit and cabin to reduce distractions. According to the commenter, as proposed, the rule would require installation of locks on those doors. Finally, one commenter says that the wording of the cockpit door requirement should be clarified to exclude 10 to 19 seat aircraft not yet produced. According to the commenter, the proposal resolves the problem for existing 10-19 seat airplanes. However, proposed § 121.2(f) would require all new airplanes to be certificated in transport category. The commenter states that new 10-19 passenger airplanes will have the same problem as existing nontransport category types; that is, cockpit doors will neither be practical nor appropriate. The commenter recommends amending § 121.313(f) to read “. . . except that airplanes type-certificated for a maximum of 19 or fewer passengers are not required to comply with this paragraph.”

AACA notes that the language of § 121.313(f), which lists required equipment for operating an aircraft, should be changed to exclude airplanes that do not have cockpit doors.

FAA Response: The FAA maintains that the cockpit key and door lock requirement should be retained to enhance aviation safety. However, the final rule language is clarified to require compliance only for airplanes with a passenger-seating configuration of 20 or more seats. Therefore, the requirement for a door lock and cockpit key does not apply to nontransport category airplanes type certificated after December 31, 1964 even if the airplane has a cockpit door.

In response to the comments regarding the EMB-120, § 121.587 allows for the door to remain open, if necessary, to provide access for a person authorized admission to the flightcrew compartment. This allows for the door to be open if the jump seat is in use by an authorized person. Section 121.587 applies to large airplanes which includes the EMB-120.

The FAA acknowledges that the commenters correctly state that keyless locks in airplanes with a passenger seating configuration of 20 or more would have to be retrofitted to work with keys. Certificate holders that would have to retrofit their door locks would incur a higher cost to comply with the requirement. Yet, the FAA strongly believes that keyless locks which only lock from the cockpit side pose a severe safety hazard if the pilots become incapacitated. The FAA maintains that an extended time period to retrofit locks is not justified in light of the many other new requirements which are even broader in scope.

Cargo and baggage compartments. Part 25 (as referenced in § 121.314) contains requirements for cargo or baggage compartment liners, smoke detection, and fire extinguishment for various classes of compartments. The compartment classification system, also duplicated in § 121.221 (which as previously discussed applies only to certain airplanes type certificated before November 1, 1946), is based on the compartment's accessibility for fire detection and extinguishment. Part 25 was amended in 1989 to require the liners of Class C and D compartments to meet more stringent flammability standards. Section 121.314

Comments: Two commenters submitted comments stating that they do not believe that the cargo or baggage compartment classification system of § 25.857, referenced in § 121.314, is not suitable for smaller airplanes with fewer than 20 seats and that the smoke detector and fire extinguisher requirements are unreasonable and unnecessary in those airplanes. In that regard, they note that many commuter category airplanes are convertible from a full passenger configuration with a relatively small baggage compartment to combination passenger/cargo (combi) configurations to cargo only. They do not believe that it is practical to modify any of the combi configurations to comply with any of the cargo compartment classes defined by § 25.857. They assert there has been no history of service problems indicating a need for such features.

No comments were received concerning compartments other than those of combi airplanes. Also, no commenters responded to the request in the preamble to Notice No. 95-5 for information concerning less-costly alternatives such as requiring only liners and smoke detection.

FAA Response: The FAA agrees that the present requirements of § 25.857 are not entirely suitable for airplanes with a passenger seating capacity of less than 20 and the FAA has initiated a rulemaking project to develop and propose similar standards that would be suitable for these airplanes. In view of this project the FAA has decided to defer this proposal for future rulemaking.

Fuel tank access covers. As a result of the 1985 Manchester British Air Tours accident (in which a piece of metal from the aircraft engine punctured the fuel tank access panel and created a fire), § 25.963(e) was amended in 1989 to require that all covers located in an area where a strike by foreign objects is likely must have as much resistance to fire or debris penetration as the surrounding structure. Concurrent with the part 25 amendment, § 121.316 was amended to require airplanes already in service to comply with § 25.963(e) on a retrofit basis. These requirements pertain to all transport category, turbine-powered airplanes. Due to their smaller size and turbo-propeller configuration, part 23 airplanes generally do not present the same hazard. The FAA did not propose to require part 23 airplanes to comply with §§ 25.963(e) and 121.316. Since § 121.316 applies only to "turbine-powered transport category" airplanes, no rule change is needed. The FAA points out that turbine-powered transport category airplanes previously operated under part 135 would have to comply with § 121.316.

Comments: Raytheon Corporation submitted comments on the costs of complying with § 25.963(e) for airplanes that in the future would be required to be type certificated in the transport category under part 25.

FAA Response: As previously discussed, the applicability of all present part 25 requirements to airplanes with a passenger seating capacity in the 10-19 range for which a type certificate is applied for after March 29, 1995, will be dealt with in a future rulemaking action. Since Notice No. 95-5 did not propose any change for airplanes in existence or for airplanes newly manufactured under existing type certificates, this issue need not be discussed further in this rulemaking.

Passenger information. Notice 95-5 proposed that affected commuters would comply with the passenger information requirements in § 121.317. There was no preamble discussion of this section because the FAA determined that current requirements for affected commuters in §§ 135.127 and 91.517 were substantively the same as those in § 121.317.

Comments: Three comments were received on this section. Commuter Air Technology suggests that seatbelts should be worn the entire time for flights of less than an hour and a half. According to the commenter, requiring seatbelts at all times while engines are running would provide better passenger safety, remove an unnecessary checklist item from the flight station, and eliminate the probability of missing a flight due to an inoperative sign. According to the commenter, each seat could be placarded and the co-pilot could make a visual check of passenger compliance after closing the door hatch prior to departure.

Two commenters state that § 121.317(a) should be revised to allow permanently lighted no-smoking signs or conspicuous placards, since smoking is prohibited on all flights.

instructs the passengers to fasten their seatbelts at the necessary times. Newly manufactured airplanes must comply with lighted seat belt sign requirements of § 121.317(a) within 2 years after the date of publication of this final rule. In addition, § 121.317(d) requires one legible sign or placard that reads "fasten seat belt while seated" that is visible from each passenger seat. Affected commuters must comply with § 121.317(d) at the time of recertification under part 121, or within 15 months, whichever occurs first.

Instruments and equipment for operations at night. Section 121.323 requires two landing lights for night operations. Under the proposal, the requirement would apply to all affected commuters. While no comments were received on the proposal, the FAA had intended to revise § 121.323 to except nontransport category airplanes certificated after December 31, 1964, from having more than one landing light. The exception was intended because small airplanes with shorter wing spans can be operated safely with only one landing light. The exception was inadvertently omitted from Notice 95-5 but is included in the final rule.

Oxygen requirements. Sections 121.327 through 121.335 cover supplemental oxygen requirements and oxygen equipment requirements. The requirements are similar to the oxygen requirements in § 135.157 except that for certain airplanes, part 121 requires less oxygen. Each affected commuter who would have to comply with part 121 oxygen requirements as a result of this rulemaking should be able to operate its airplanes in accordance with the oxygen requirements specified in part 121.

Comments: Fairchild Aircraft comments that the first aid oxygen requirements of § 121.333(e)(3) are inappropriate for smaller commuter service and that this section should be revised to exclude airplanes with fewer than 20 seats. This commenter also asks that § 121.335 be revised to allow oxygen flow rates based on the airplane's certification basis rather than Civil Air Regulation 4b.651. Fairchild finds that this would avoid unnecessary complication and expense.

FAA Response: In the case of first aid oxygen, since Notice 95-5 proposed no flight attendant for the 10- to 19-seat airplane, requiring the first aid oxygen that would be dispensed by a flight attendant would not be logical. Since the airplanes operated by the affected commuters were not type certificated for flight above 25,000 feet and since § 121.333(e)(3) only applies to pressurized airplanes that operate above 25,000 feet, it would not as a practical matter apply to commuter (or predecessor) airplane operations. The requirement does apply to airplanes with 20 to 30 passenger seats, as proposed.

In the case of § 121.335, the FAA finds that parts 23 and 25 provide standards for oxygen that either meet or exceed the standards in section 4b.651 of the CAR. Section 4b.651 has a built in deviation authority.

Portable oxygen for flight attendants. Section 121.333(d) requires that each flight attendant shall, during flights above 25,000 feet, carry portable oxygen equipment with at least a 15-minute supply of oxygen, unless enough portable oxygen units with masks or spare outlets and masks are distributed through the cabin to ensure immediate availability of oxygen to each flight attendant regardless of his or her location at the time of cabin depressurization. Part 135 does not have a similar requirement for portable oxygen for flight attendants. In Notice 95-5, the FAA proposed that affected commuters who use flight attendants in their operations and that operate above 25,000 feet be required to comply with the part 121 requirement. No comments were received on this issue and the final rule is adopted as proposed. For a related discussion on the use of oxygen, see the discussion under "Oxygen Requirements."

Protective breathing equipment (PBE). Section 121.337 contains requirements for equipping the flight deck and passenger compartments of transport category airplanes with PBE. Part 135 does not currently require any type of PBE.

Section 121.337(b)(8) (smoke and fume protection) requires PBE, either fixed or portable, to be conveniently located on the flight deck and easily accessible for immediate use by each flight crewmember for smoke or fume protection at his or her duty station. In addition, § 121.337(b)(9) (fire combatting)

seating configuration of 20 to 30 seats would have to have at least four PBE: one PBE, fixed or portable, for each flight crewmember at his or her station; an additional portable PBE on the flight deck for fighting fires; and a portable PBE in the passenger compartment located within 3 feet of the required hand fire extinguisher.

The proposal revised the applicability of the current rule to include other than transport category airplanes. Proposed § 121.337(b)(9)(iv) was also revised to except airplanes having a passenger-seating configuration of fewer than 20 seats and a payload capacity of 7,500 pounds or less from the requirement to have a PBE in the passenger compartment. The exception is needed because these airplanes are not required to have a flight attendant; for these airplanes, the portable PBE on the flight deck could be used by a flight crewmember for fighting a fire.

The FAA proposed to require compliance with § 121.337 by a date 2 years after the publication date of the final rule. (See § 121.2)

Comments: Several commenters oppose the PBE requirement. These commenters are concerned about the lack of space in the plane, the high compliance cost, and the lack of benefits in having the equipment. These commenters state that PBE equipment on non-pressurized aircraft is not justified. Two commenters claim that their current equipment (built in oxygen supply systems and masks) ought to exempt them from the PBE requirement. One commenter incorrectly believes that a PBE would be required for the cabin on METRO aircraft (a 19 seat airplane). One commenter suggests that in the interest of safety the FAA should reduce the compliance time for PBE equipment to 6 months. Though commenters provide cost estimates to install PBE on their airplanes, costs are provided only for 10 to 19 seat airplanes, which would not be required to have PBE in the cabin.

FAA Response: The FAA maintains that the proposed PBE requirement for affected commuters is appropriate. There are several safety benefits for requiring smoke and fume PBE. The use of smoke and fume PBE required by § 121.337(b)(8) would help prevent the injury or death of flight crewmembers from smoke or harmful gases.

The FAA contends that there is adequate space in the cabin of 20- to 30-seat commuter airplanes to accommodate portable PBE for fire combatting, and no major cabin retrofits would be required. With regard to firefighting PBE, the FAA has determined that such equipment is not appropriate for operations with 10-19 passengers. There are no flight attendants on these flights and the pilots generally remain on the flight deck to operate the aircraft during an emergency. In an emergency, passengers will have access to a fire extinguisher and will be able to assist in extinguishing any flames within the cabin. However, passengers are not trained in the use of fire combatting PBE and would not know how to operate such equipment. Accordingly, nontransport category airplanes type certificated after December 31, 1964, having a passenger-seating configuration of 10- to 19-seats are excepted in the final rule from the requirements in § 121.337(b)(9) for having PBE's for combatting fires.

In response to other comments, the lack of a pressurized cockpit does not diminish the need for PBE to enhance safety in case of fire, nor can existing oxygen systems provide adequate protection for fighting a fire. Approved PBE in the cabin must have a protective hood and be fully mobile.

Due to the broad scope of this rulemaking action, certificate holders will have to deal with many new requirements. Therefore, as proposed, a consistent compliance period of 2 years is applied to all affected airplanes for acquiring PBE.

Emergency equipment for extended overwater operations. Sections 121.339 and 135.167 require that airplanes engaged in extended overwater operations (more than 50 nautical miles from the nearest shoreline) provide the following: enough life rafts of a rated capacity and buoyancy to accommodate the occupants of the airplane; a life preserver equipped with an approved survivor locator light for each occupant of the airplane; a pyrotechnic signaling device for each life raft; a survival kit and a survival type emergency locator transmitter. In addition, § 121.339 requires that unless excess rafts of enough capacity are provided, the buoyancy and seating capacity of the rafts must accommodate all occupants of the

Comments: Four commenters argue against the requirement for a spare life raft on commuter airplanes. One commenter says that the spare life raft is not necessary because seats can be equipped with additional life vest storage pouches. Another commenter says that the spare life raft is appropriate for larger airplanes but not for 10 to 30 seat aircraft. This commenter also suggests that the rule should remain as presently written under § 135.167, and, on a case-by-case basis, the FAA can require certificate holders to obtain a spare life raft. Another commenter states that spare life rafts should not be required on aircraft with less than 20 passenger seats because the requirement will increase operating costs and reduce passenger revenues. A fourth commenter states that the cumulative weight, space, and compliance costs will be significant for affected Alaskan operators and that these costs cannot be spread across a large number of passenger seats as can be done with a larger aircraft.

Three commenters state that the requirement in § 91.205 (b)(11) for a pyrotechnic signaling device is understandable for general aviation aircraft, but is impractical and superfluous for airplanes operating under part 121 in scheduled air carrier service. The commenters recommend that § 91.205 be revised to exclude airplanes operating under part 121.

FAA Response: The FAA maintains that airplanes conducting extended overwater flights need to carry enough life rafts to accommodate all passengers in the event of the loss of the life raft with the largest rated capacity. Such a requirement will enhance safety in the event of an accident. Individual flotation devices are not adequate for safety in the event of a water ditching because passengers tend to separate in open water. A life raft enables passengers to stay together. An even greater threat is hypothermia, a sequence of physical reactions resulting from the loss of body heat. In cold water, a person will experience increased difficulty with mobility and intense shivering occurs. In arctic waterways, survival time can be as little as 2 or 3 minutes. Thus, a spare life raft is appropriate for affected commuters to enhance passenger safety. The requirement in part 121 for equipping each life raft with a pyrotechnic signaling device is identical to part 135 for extended overwater operations. The recommendation to except scheduled air carriers from the provisions of § 91.205(b)(11) is beyond the scope of this rulemaking. Moreover, under § 119.1(c) persons subject to part 119 must comply with other requirements of this chapter, except where those requirements are modified by or where additional requirements are imposed by parts 119, 121, 125, or 135 of this chapter. Therefore, the final rule requires commuter airplanes to adhere to part 121 standards and provides deviation authority on a case by case basis.

Flotation devices. Section 121.340 requires that a large airplane in any overwater operation must be equipped with life preservers or with an approved flotation means for each occupant. Because it is practically impossible to operate any place without flying over a body of water of sufficient depth to require some sort of flotation means, § 121.340 has been applied so that virtually every airplane is equipped with either flotation cushions or life preservers. In parts 121 and 135, life preservers are required only for extended overwater operations, (§§ 121.339 and 135.167). Therefore, airplanes used in extended overwater operations are already equipped with life preservers and do not need to have flotation cushions.

The FAA proposed that airplanes equipped with 10 or more seats operating in scheduled passenger operations would comply with § 121.340 and accordingly proposed revising the section to delete the word "large." To allow any replacement of seat cushions to be coordinated with the seat cushion flammability requirements of § 121.312(c), the FAA proposed a compliance date of 2 years after the publication date of the final rule.

Comments: The FAA received three comments that oppose the requirement for flotation devices. One commenter opposes the requirement because of the equipment cost and weight penalty. This commenter determines that the seat cushions in the METRO aircraft would not serve as effective flotation devices. The commenter provides a cost estimate for acquiring and retrofitting individual flotation devices for METRO airplanes. The commenter also states that each flotation device for 10 to 30 seat airplanes would have to be equipped with an approved survivor location light. A second commenter states that the rule should allow exemptions for operations that do not fly over or near large bodies of water.

10 to 50 seat airplanes are required on all flights. Section 121.340(b) contains provisions for requesting an approval to operate without the flotation means if the operator shows that the water over which the airplane is to be operated is not of such size and depth that life preservers or flotation devices would be needed for survival.

The FAA concurs with one of the commenters that § 91.205 requires flotation devices for all airplanes involved in extended overwater flights. Section 121.340 is clearly more restrictive.

Although the compliance date for meeting passenger seat cushion flammability requirements has been extended to 15 years, the compliance time of 2 years for providing flotation devices is the same as proposed.

Equipment for operations in icing conditions. Section 121.341 requires certain equipment for operations in icing conditions. The proposal would require affected operators to comply with this section. In accordance with § 121.341(b), to operate an airplane in icing conditions at night, a wing ice light must be provided or another means of determining the formation of ice on the parts of the wings that are critical from the standpoint of ice accumulation. This would be a new requirement for 10- to 19-passenger seat airplanes.

No comments were received on this proposal; however, the FAA has determined that the requirements of § 135.227 (c), (e), and (f) need to be incorporated into § 121.341 to accommodate certain affected airplanes. These requirements pertain to operating limitations for flying into known icing conditions if the airplane is not equipped for icing conditions. Thus the final rule § 121.341 incorporates the part 135 language.

Pitot heat indication system. Section 25.1326 requires a pitot heat indication system to indicate to the flightcrew when a pitot heating system is not operating. Part 23 currently requires pitot heat systems for airplanes approved for IFR flight or flight in icing conditions, but does not require pitot heat indicators. Section 121.342 currently requires a pitot heat indication system on all airplanes that have pitot heat systems installed.

In recommendation A-92-86, the National Transportation Safety Board (NTSB) recommended that small airplanes certificated to operate in icing conditions and at altitudes of 18,000 feet mean sea level and above should be modified to provide a pitot heat operating light similar to the light required by § 25.1326. As recommended by the NTSB, the FAA proposed to amend part 23 to require such indication for commuter category airplanes (Notice No. 94-21, 59 FR 37620, July 22, 1994). This new requirement, when adopted, will apply to new type certification and will not affect existing in-service commuter airplanes or future production of currently approved commuter airplanes.

In Notice 95-5, the FAA proposed to amend § 121.342 to require nontransport category airplanes type certificated after December 31, 1964, to incorporate pitot heat indication systems. Affected commuters would have to comply within 4 years after the publication date of this rulemaking.

Comments: Three comments were received on this proposal. Fairchild Aircraft Co., a manufacturer of commuter airplanes fully supports the proposal.

RAA notes that FAA's cost estimate of \$500 was significantly lower than the commenter's estimate of between \$1,500 and \$25,000 per airplane. The commenter further states that there was no known history of accidents or incidents to justify the cost of retrofits and recommends that the requirement apply only to newly manufactured airplanes.

Commuter Air Technology, an aircraft modifier, notes that pitot tubes are accessible to ground personnel who could ascertain their proper function prior to flight. The commenter argues that because of the short duration of commuter flights (usually 1 hour) failure in flight would probably allow for continued flight to the next airport.

FAA Response: As a result of comments received in response to Notice 95-5, the FAA re-examined the cost estimates of this rulemaking. Those revised cost estimates, which are higher than those in the proposal, are included in the Regulation Evaluation Summary of this rulemaking.

flight data recorders (FDR's). Notice 95-5 did not propose any substantive revisions to current part 121 or part 135 flight data recorder (FDR) requirements. According to the proposal, affected commuters would continue to meet part 135 requirements while the FAA is developing updated FDR requirements for both parts 121 and 135.

Comments: One commenter states that some of the current equipment being used is providing inadequate records and that part 121 and 135 certificate holders should be required by December 31, 1999, to install new FDR on all airplanes. He further states that industry data indicates the changeover will cost \$29 million divided by 454 million passengers a year, and that equates to 6 cents increase in ticket prices.

AIA and Raytheon state that following NTSB safety recommendations on FDR's could result in as large an impact on the economic viability for current and future aircraft in this category as the effects of Notice 95-5. They further state that although additional information from FDR's is needed, the safety recommendations as written would require 56 to 84 channels of data on a 1900D and would be excessive for most data requirements. This would result in a large redesign effort and related increases in costs.

American Eagle comments that it believes that this equipment, as well as cockpit voice recorders, is important in the post-incident investigation process and, as a result, has installed FDR's on all its aircraft even though not all aircraft operated under part 135 are required to have them. It strongly supports extending the current part 121 requirement to all aircraft with 10 or more seats operating in scheduled passenger service. In addition, the commenter supports regulations which would require such equipment to meet a new, higher minimum standard.

FAA Response: A recommendation for a rule change on FDR's is being addressed by the Aviation Rulemaking Advisory Committee (ARAC), and the concerns of the commenting parties will be reflected in that separate rulemaking if a rule change is proposed. This rulemaking did not propose any increase in channels for existing FDR's.

For clarification the proposed rule language has been revised in § 121.344 of the final rule to state that § 135.152 FDR requirements will apply to airplanes with a payload capacity of 7,500 pounds or less and a passenger seating configuration, excluding any pilot seat, of 10-30 seats. The proposed rule had not specified passenger seating capacity.

Radio equipment. Sections 121.345 through 121.351 cover radio equipment requirements. Part 121 specifies radio equipment requirements for operations under VFR over routes navigated by pilotage, for operations under VFR over routes not navigated by pilotage or for operations under IFR or over-the-top, and for extended overwater operations. The requirements are more specific and restrictive than those in § 135.161. The radio equipment requirements in part 121 are cumulative; that is, the regulations prescribe basic radio equipment requirements for VFR over routes navigated by pilotage and additional equipment for VFR over-the-top or IFR. Almost all part 121 operations are conducted under IFR. The proposed rule would require affected commuters to comply with part 121 radio equipment requirements.

The final rule revised § 121.349 (radio equipment for operations under VFR over routes not navigated by pilotage or for operations under IFR or over the top) by adding a new paragraph (e) which incorporates requirements in § 135.165(a). This change is necessary because part 121 does not have comparable requirements.

Emergency equipment for operations over uninhabited terrain. Section 121.353 prescribes the emergency equipment needed for operations over uninhabited terrain for flag and supplemental operations. The requirements include pyrotechnic signaling devices, emergency locator transmitters (ELT's), and survival kits equipped for the route to be flown. The proposed rule would require compliance with § 121.353.

Comments: Two commenters state that application of § 121.353 to affected commuters would provide relief from compliance with § 91.205, which would reduce the standards. One of these commenters claims that S-type ELT's as required by § 121.353 are useful for sea ditching but are of no use over uninhabited

holders.

RAA and ASA point out that the requirement for ELT's in § 91.207 exempts turbojet-powered aircraft and aircraft engaged in scheduled flights by scheduled air carriers. RAA and ASA believe that all jet-powered airplanes that normally operate under part 121 whether or not they utilize propellers should be exempt from the requirements of § 91.207 during flight operations under part 91, such as ferry, training, testing, proving runs, which are incidental to or in support of scheduled operations. RAA and ASA recommend revising § 91.207(f)(1) to read: "Large turbine powered airplanes."

AACA indicates that the economic analysis did not include the weight penalties or costs for installing, maintaining, repairing, and training for the use of survival kits. AACA also states that the rule is unclear as to when the kits are required since "uninhabited areas" is not defined. AACA recommends clarifying the applicability of these requirements to Alaska. AACA, as well as other commenters, also states that there is an Alaskan state law requiring extensive survival equipment on board any aircraft operated in the State.

FAA Response: In response to the applicability to Alaska, although scheduled intrastate operations within the States of Alaska and Hawaii are currently conducted under flag rules, as a result of this final rule, these will now be domestic operations and the survival equipment requirements do not apply to domestic operations. The FAA did not intend to reduce requirements for operations over uninhabited terrain in Alaska or Hawaii as currently applicable. Therefore, the title of § 121.353 has been revised and an applicability statement added to include Alaska and Hawaii. Since these operators have been meeting flag requirements, this revision will not be a change for them.

The revisions requested to part 91 to exempt ferry flights and other types of flight incidental to scheduled flights is a separate issue from the requirements of § 121.353 which pertain only to emergency equipment for operations over uninhabited terrain. Any amendment to part 91 would need to be part of a separate rulemaking.

The FAA does not agree that the language of § 121.353 should be revised to clarify that it replaces the requirements for pyrotechnic signaling devices in § 91.205(b)(11) pertaining to aircraft for hire operated over water beyond power off gliding distance to shore. The proposed applicability of § 121.353 to affected commuters if they fly a supplemental or flag operation does not affect the applicability of part 91 requirements. The requirements of § 91.205(b)(11) would continue to apply under applicable circumstances. Part 121 requirements are in addition to part 91, not in lieu of part 91.

The FAA does not agree with the commenter's claim that survival-type ELT's do not work except in water ditchings. It is true that S-type ELT's must meet certain buoyancy, waterproofness, and immersion in salt water requirements. While many S-type ELT's employ water-activated batteries, they are not required. Regardless of the type of battery used, each ELT must have a means by which it can be activated manually.

In addition, this rulemaking does not define "uninhabited terrain." When the predecessor regulation to § 121.353 was proposed in CAB draft release 58-24 in 1960, "uninhabited terrain" was defined as "flights for long distances over frigid or tropical land areas for which the Director finds such equipment to be necessary for search and rescue operations because of the character of the terrain to be flown over." When the rule was adopted, the wording was changed to provide the Administrator more flexibility in identifying uninhabited areas. Since implementation is on a case-by-case basis through operations specifications, it was determined that the proposed wording was not necessary. This provision has been in effect for over 30 years without any problem about the meaning of "uninhabited areas."

Airborne weather radar. The proposed rule would require all affected commuters to have airborne weather radar in accordance with § 121.357. Currently, part 135 requires weather radar for 20-30 passenger seat airplanes and weather radar equipment or approved thunderstorm detection equipment for 10-19 passenger airplanes.

Alaska and Hawaii and within parts of Canada. AACA requests that the FAA specifically address the issue that airborne weather radar and airborne thunderstorm detection equipment will not be required for operations previously excepted under part 121 and part 135 (§§ 121.357(d) and 135.173(e)). According to the commenter, there have been no meteorological changes in Alaska since the regulation was originally written; therefore, this equipment is no more necessary now than it ever was.

FAA Response: The FAA agrees with AACA that, in accordance with § 121.357(d), airborne weather radar is not required for airplanes used solely within the State of Hawaii or the State of Alaska or that part of Canada west of longitude 130 degrees W, between latitude 70 degrees N and latitude 53 degrees N, or during any training, test, or ferry flight. This exception is retained in the final rule. In Notice 95-5 the FAA did not propose to delete the § 121.357(d) exception.

All other affected operators would have to have airborne weather radar within the 15-month compliance period.

Traffic Alert and Collision Avoidance System (TCAS). Under the proposal, affected carriers would be required to comply with part 121 TCAS requirements in § 121.356. There are no substantive differences between part 121 and part 135 TCAS requirements for aircraft with passenger seating configurations of 10-30 seats.

Comments: Fairchild Aircraft recommends that the words, "combination cargo" be deleted from § 121.356(b).

ALPA says that the FAA should require TCAS II for aircraft with fewer than 30 passenger seats, including cargo aircraft (which have increased in recent years).

RAA recommends revising § 121.356(a) to require that "... each certificate holder shall equip its airplanes with an approved TCAS II traffic alert and collision avoidance system and the appropriate class of Mode S transponder. . . ."

Two certificate holders, Samoa Air and Inter Island Air, say that TCAS is expensive and useless for their operating environment, i.e., airspace with little air traffic.

Fairchild Aircraft states that § 121.345(c)(2), which requires Mode S transponders, is similar to a requirement in part 135 (§ 135.143(c)(2)). According to the commenter, the Mode S equipment has not been installed and the commenter believes that the FAA is granting exemptions to the requirement for part 135 certificate holders. If exemptions would not be granted under part 121, significant cost would be involved.

FAA Response: The intent of the proposed rule § 121.356 was that airplanes with a passenger seating configuration of 10 to 30 seats must be equipped with at least a TCAS I system which is the same as the present part 135 requirement for the affected airplanes. TCAS I systems are not required to be equipped with Mode S transponders.

As a commenter states, unrelated to TCAS I requirements, exemptions to the Mode S requirements of part 135 are currently in effect. Any affected commuters who hold an exemption from the part 135 requirement or from § 135.143, Mode S requirements, after this final rule must reapply to be exempted from the Mode S requirements of part 121.345.

The commenter's recommendation to require TCAS for all-cargo operations is beyond the scope of this rulemaking, as are the recommendations to require TCAS II for all airplanes and to exempt certain affected certificate holders from the requirement for certificate holders to have TCAS I by December 1995.

Low-altitude windshear systems. Section 121.358 requires an approved airborne windshear warning system for most turbine powered airplanes. It specifically excludes turbopropeller-powered airplanes. No comments were received concerning this section and the final rule is adopted as proposed. Comments received on windshear training requirements are discussed under subpart N.

No comments were received on this issue; however, the FAA has discovered that the word "large" was not deleted from § 121.360. This deletion is necessary if the requirements are to apply to all affected commuters. Accordingly the word "large" is deleted in the final rule.

VI.A.8. Subpart L—Maintenance, Preventive Maintenance, and Alterations

Applicability. Part 121 certificate holders are required to adopt a continuous airworthiness maintenance program (CAMP), which has a proven track record for large transport category airplanes. Under § 135.411(a)(2), airplanes that are type certificated for a passenger-seating configuration of 10 seats or more are already required to comply with a CAMP similar to part 121 requirements. The proposed rule would require all airplanes type certificated for 10 or more passengers to comply with part 121 CAMP requirements. These requirements are consistent with present-day maintenance standards and techniques to manage airplane airworthiness. The proposal to include affected commuters under part 121 maintenance requirements would not necessitate a revision to § 121.361.

Section 121.361(b) contains a deviation provision allowing certain foreign noncertificated persons to perform maintenance. Affected commuters would now have this option available. Since many of the airplanes that are the subject of this rulemaking are manufactured outside the United States, this deviation provision would allow certificate holders to have the original equipment manufacturers perform some overhauls and repairs.

Comments: Jetstream Aircraft Limited supports the proposals to apply this subpart to affected commuters.

American Eagle encourages proposed rulemaking which would mirror current parts 121 and 25 maintenance and inspection requirements for aircraft certificated under part 23 or SFAR 41 and used in commercial aviation of any type.

FAA Response: Since the comments in effect support the proposed rule changes, they are adopted as proposed.

Responsibility for airworthiness. Section 121.363 places the responsibility for airworthiness of an airplane on the certificate holder; § 135.413 contains a similar requirement. Under the proposal, affected commuters must comply with § 121.363. Section 135.413(a) requires a part 135 operator to have defects repaired between required maintenance under part 43. This provision does not appear in part 121. Part 121 operators are required to have defects repaired in accordance with their maintenance manual. Since an FAA-approved maintenance manual requires no less than the part 43 requirements, affected commuters would experience no change in requirements under the proposal. On this issue, no comments were received and the final rule is adopted as proposed.

Maintenance and preventive maintenance, and alteration organization. Section 121.365 requires the certificate holder to have an adequate maintenance organization for the accomplishment of maintenance, preventive maintenance, and alterations on its airplanes. The provision allows the certificate holder to arrange with another person to accomplish the work, provided that the certificate holder determines that the person has an organization adequate to perform the work. This provision requires separate inspection functions to ensure that those items directly affecting the safety of flight are verified to be correct by someone other than the person who performed the work.

The FAA recognizes that other provisions of the proposed rule in Notice 95-5, which would require affected certificate holders to install new equipment and might lead to replacement of part 23 type certificated airplanes with part 25 type certificated airplanes, could necessitate that maintenance personnel (as required by this section and by §§ 121.367 and 121.371) have additional skills and training.

Comments: American Eagle supports the proposal.

FAA Response: Since the only comment on this issue is supportive, the rule is adopted as proposed.

were received on this issue and the final rule is adopted as proposed.

Required inspection personnel. Sections 121.371 and 135.429 contain similar requirements for inspection personnel, including provisions for specific qualifications for and supervision of an inspection unit. Included is a requirement for listing names and appropriate information of persons who have been trained, qualified, and authorized to conduct required inspections. This requirement ensures that competent and properly trained inspection personnel are authorized to perform the required inspections. In Notice 95-5, the FAA required affected commuters to comply with part 121. No comments were received on this issue and the final rule is adopted as proposed.

Continuing analysis and surveillance. Section 121.373 on continuing analysis and surveillance is almost identical to the provisions of § 135.431. The FAA proposed that affected commuters comply with § 121.373. Section 121.373 provides for: the establishment by the certificate holder of a system to continually analyze the performance and effectiveness of the programs covering maintenance, preventive maintenance, and alterations; the correction of any deficiencies in those programs; and the requirement by the Administrator that the certificate holder make changes in either or both of its programs if those programs do not contain adequate procedures and standards to meet the requirements of this part. No comments were received on this issue and the final rule is adopted as proposed.

Maintenance and preventative maintenance training programs. Sections 121.375 and 135.433 contain identical requirements prescribing training programs that ensure that persons performing maintenance or preventive maintenance functions (including inspection personnel) are fully informed about procedures, techniques, and new equipment in use and that those personnel are competent to perform their required duties. The FAA proposed that operators comply with part 121. On this issue, no comments were received and the final rule is adopted as proposed.

Maintenance and preventive maintenance personnel duty time limitations. Section 121.377 establishes the requirements for maintenance personnel to be relieved from duty for a period of at least 24 consecutive hours during any 7 consecutive days, or the equivalent thereof within any calendar month. This requirement is for maintenance personnel within the United States. This provision would be a new requirement for affected commuters.

Comments: AACA states that most Alaskan certificate holders utilize mixed fleets ranging from under 9 passenger seats, 10-19 seats, and more than 20 seats. These carriers frequently employ maintenance personnel who are qualified to work on all the aircraft in a particular certificate holder's fleet, regardless of the aircraft's seating capacity. If the rule is adopted as proposed, these certificate holders will have to schedule maintenance personnel according to part 121 standards to avoid inadvertently violating the maintenance personnel duty time limitations. At locations with limited maintenance personnel and mixed fleets of 1-to-9, and 10-to-29 seat aircraft, this new requirement would place an additional administrative scheduling burden and financial compliance cost on the air carrier. Alternatively, an air carrier might have to develop and apply two separate work schedules for mechanics, one for part 121 mechanics and aircraft and another for part 135 mechanics and aircraft. AACA states that the FAA's economic analysis failed to address any cost impacts of this requirement. AACA also asks for guidance for those operators who employ maintenance personnel that might work under both part 121 and part 135.

FAA Response: The existing rule requires only 24 consecutive hours off during any 7 consecutive days. While it may have been possible to work mechanics under part 135 7 days a week, without rest, the FAA believes that the combination of union work rules, Department of Labor regulations, and general practice of a day of rest each week would, in effect, accomplish the same result as the rule.

Mechanics must receive adequate rest in order to properly perform their duties. Prescribing a minimum standard will ensure that some rest is provided. It would be inconsistent to require rest for the pilots and flight attendants but not for the people responsible for maintaining the airplane. The FAA believes that the burden of scheduling and providing a day of rest would be minimal. Standard time cards, a common practice, could be used to show compliance.

each person, other than a repair station certificated under the provisions of subpart C of part 145, who is directly in charge of maintenance, preventive maintenance, or alterations, and each person performing required inspections, hold an appropriate airman certificate. The FAA proposed that affected commuters comply with part 121. No comments were received on this issue and the final rule is adopted as proposed.

Authority to perform and approve maintenance, preventative maintenance, and alterations. Sections 121.379 and 135.437 contain similar requirements allowing certificate holders to perform or make arrangements with other persons to perform maintenance, preventive maintenance, and alterations as provided in its continuous airworthiness maintenance program and its manual. In addition, a certificate holder may perform these functions for another certificate holder. The rules require that all major repairs and alterations must have been accomplished with data approved by the Administrator. The FAA proposed that affected commuters comply with part 121. No comments were received on this issue and the final rule is adopted as proposed.

Maintenance recording requirements. Section 121.380 provides for the preparation, maintenance, and retention of certain records using the system specified in the certificate holder's manual. The rule also specifies the length of time that the records must be retained and requires that the records be transferred with the airplane at the time it is sold. A small change was proposed to § 121.380(a)(2) to accommodate propeller-driven airplanes used by some affected commuters and to § 121.380(a)(2)(v) to adopt the language found in § 135.439(a)(2)(v) to provide more complete records on airworthiness directive compliance.

Comments: Zantop International Airlines, Inc. (a current part 121 certificate holder) objects to the proposed change to § 121.380(a)(2)(i) that would add engine and propeller total time in service to the list of items that must be recorded. Zantop says that the engine and propeller requirement is new for them and that the aircraft (airframe) total hours in service is the only time transferred on many of its older aircraft. The new requirement would result in searching maintenance records to determine the historical time on the engine and propeller. In some cases this information may not be available. Zantop recommends that an exemption be provided for older aircraft or that these records only be required for future certifications.

FAA Response: Although current § 121.380(a)(2)(i) does not specifically call for total time in-service records of engines or propellers, it does require a record of life-limited parts for these components. The only way to accomplish this is by keeping records for total time in service. Total time in service records may consist of aircraft maintenance record pages, separate component cards or pages, a computer list, or other methods as described in the applicant's manual.

Tracing a life-limited part back to its origin would be required only in those situations where the certificate holder's records are so incomplete that an accurate determination of the time elapsed on the life-limited part could not be made.

The part 135 certificate holders moving to part 121 will have no impact from this rule, since they are already tracking airframe, engine, and propeller time under § 135.439(a)(2)(i).

The airframe, engine, and propeller information is helpful in tracking airworthiness directive compliance and life limits for life-limited parts. It also standardizes language between part 135 and part 121. The FAA believes that at least some of the current part 121 certificate holders have the information in existing required records in order to show compliance with life-limited components. However, the FAA has decided to allow current part 121 operators some time to come into compliance with the requirements for recording total time for engines and propellers. The final rule for § 121.380 has been revised accordingly.

Transfer of maintenance records. Section 121.380a requires the certificate holder to transfer certain maintenance records to the purchaser at the time of the sale, either in plain language form or in coded form. This section is worded the same as § 135.441 except that the part 121 provision allows the purchaser to select the format of the transferred records. Notice 95-5 specified that affected commuters comply with part 121. No comments were received on this issue and the final rule is adopted as proposed.

Flight attendants being seated during movement on the surface. Section 121.391(e) states that during movement on the surface, flight attendants must remain at their duty stations with safety belts and shoulder harnesses fastened except to perform duties related to the safety of the airplane and its occupants. Part 135 has a similar provision in § 135.128(a), except that it does not specify that flight attendants may be performing safety duties during movement on the surface. The FAA proposed that affected commuters comply with part 121. On this issue, no comments were received and the final rule is adopted as proposed.

Flight attendants or other qualified personnel at the gate. The FAA proposed that all airplanes being operated by affected commuters be required to comply with current § 121.391(e); that is, they must have a flight attendant or substitute (such as a flight crewmember or trained gate agent) on board when the airplane is parked at the gate and passengers are on board. The substitutes must be given training in the emergency evacuation procedures for that airplane as required by § 121.417 and they must be identified to the passengers. If there is only one flight attendant or other qualified person on board the airplane, that person must be located in accordance with the certificate holder's FAA-approved operating procedures.

As a result of the proposed rule, § 121.391(e) applies in the future to some operations that do not require flight attendants. Therefore, the FAA proposed to move § 121.391(e) to a new separate section, proposed § 121.393, to highlight the crewmember requirements that apply when an airplane is on the ground and passengers remain on board before continuing to another destination.

Comments: AACA opposes the requirement for flight attendants at the gate. The commenter states that it would be impossible for one of the two crewmembers on the 10-to-19 seat airplanes to stay on board with passengers while parked at the gate. Both crewmembers would be needed to assist in the loading and unloading process. Furthermore, the commenter states that deplaning passengers would not be a viable option because airports do not have the proper facilities. Most airplanes are not met by a gate agent in rural Alaska airports, and airplanes do not pull up to a terminal. Therefore, the commenter states that a trained substitute would have to stay on board the airplane with the passengers while parked at the gate 100% of the time. The commenter states that the FAA has underestimated the training costs and wage costs for the option of using a substitute. The commenter estimates that this requirement would cost about \$2.9 million (costs not broken down) each year for all of the Alaskan commuter air carriers to comply.

FAA Response: While many of the affected airplanes are operated seasonally and do not fly in the winter, some operate during extreme weather conditions into airports that do not have terminals to use for deplaning. To the extent possible the FAA would like a flight attendant or pilot on board whenever passengers are on board. Since the affected 10- to 19-passenger-seat airplanes do not require a flight attendant, it would be inconsistent to require one only during ground operations. However, each of the affected commuter airplanes require two pilots for their operations. One can stay on board while the other does any necessary work off the airplane. Other options are to deplane the passengers or use a trained substitute.

The FAA recognizes that part 121 was written with the expectation that flight attendants would be available and that pilots would not be loading baggage or performing other duties outside the airplane. Therefore, the FAA is revising § 121.393 for airplanes for which a flight attendant is not required to allow a crewmember or qualified person to be on board or near the airplane. If the crewmember or qualified person is not on board the crewmember or qualified person must be near the airplane and in a position to adequately monitor passenger safety. Airplane engines must be shut down and at least one floor level exit must remain open to provide for the deplaning of passengers. This amendment is consistent with current FAA policy for refueling with passengers on board. The FAA has determined that this option is functionally equivalent to having a qualified person on board since these airplanes are small enough to monitor passenger compartments from outside the airplane.

actions would be expected to have a dramatic impact on future accident statistics. Training should be the principal focus for safety improvement together with future programs for safety system monitoring. Raytheon also states that while NPRM 95-5 was not intended to cover training, Notice 95-5 probably would not have been proposed if training were more effective.

Air Vegas comments that all additional flight training would have to be done in the aircraft because there is no Beech 99 simulator in existence. This would increase the hours for initial and transition training and nearly double training costs.

Fairchild Aircraft says that, under §§ 121.424 and 121.427 as well as part 121 Appendix E, windshear training must be performed in a simulator and that such simulators are not likely to be available to many commuter airline operators. This commenter adds that there is no evidence that the part 135 windshear program is inadequate.

Fairchild Aircraft recommends that §§ 121.424 and 121.427, as well as Appendix E, be amended to provide relief from windshear simulator training for certificate holders of turbopropeller airplanes with 30 or fewer passenger seats. An individual commenter recommends that low-altitude windshear training be made a part of both ground and flight (simulator) training under part 135. This commenter says that, currently, commuter aircraft are not equipped to receive advance warning of low-level windshear and that training would help pilots to better deal with such occurrences. ALPA proposes that § 121.400(b) be amended by adding a group specific to propeller-driven aircraft with a seating capacity between 10 and 30 seats. This will ensure that personnel, particularly dispatchers and meteorologists, understand and appreciate the working environment of these aircraft, including the facilities and capabilities associated with weather, airports, maintenance, and logistics, etc.

An individual commenter supports increased commuter training for several reasons: Most accidents are related to human (not equipment) error, there is a need for more simulator training among commuters, and part 135 aircrews must deal with a high number of regional landings and takeoffs as well as varied weather conditions.

Jetstream Aircraft Limited and American Eagle support the proposed rulemaking to strengthen part 135 crewmember training.

FAA Response: The comments on appropriate training requirements, while generally supportive of the FAA's goals in this rulemaking, are actually more relevant to the separate rulemaking addressed in section III.E, Related FAA Action. The windshear simulator training requirements only affect turbine powered airplanes (turbojets) on which windshear equipment is required by § 121.358.

Subpart O, Crewmember Qualifications. Because of the separate rulemaking previously discussed, the FAA did not propose any changes to subpart O except for the removal of an obsolete section (§ 121.435). Nonetheless, a number of comments were received.

Comments: RAA, ASA, Gulfstream, United Express, Big Sky Airlines, and an individual oppose the requirement that currently qualified first officers performing the duties of second in command obtain initial operating experience (IOE) under § 121.434. However, these commenters do support an IOE requirement for newly designated first officers and new hires. United Express recommends that air carrier proving runs be used for operations evaluation and that if, during the proving runs, an airline does not meet performance criteria, operations should terminate until a satisfactory fix is established.

American Eagle supports IOE requirements for all first officers and believes that the additional costs associated with such a requirement are worth it to ensure that these pilots are fully qualified.

RAA, ASA, and Gulfstream believe that a basis and criteria for "grandfathering" these current and qualified seconds in command can be the training records of each of these airmen as well as the flight records documenting their experience as first officers.

raised by these commenters have been considered in those rulemaking actions.

VI.A.11. Subpart P—Aircraft Dispatcher Qualifications and Duty Time Limitations: Domestic and Flag Operations

Requirements for dispatch systems and aircraft dispatcher qualifications are discussed in section V.F., Dispatch system.

VI.A.12. Subparts Q, R, and S—Flight Time Limitations and Rest Requirements: Domestic, Flag, and Supplemental Operations

Requirements for flight time limits and rest requirements are discussed in section V.D., Flight time limits and rest requirements.

VI.A.13. Subpart T—Flight Operations

Operational control. Sections 121.533 and 121.535 require each domestic and flag operation to be responsible for operational control and specify the responsibilities for aircraft dispatchers and pilots for each flight release. No comments were received on these sections and the final rule is adopted as proposed; however, related comments on dispatch system requirements are discussed in section V.F., Dispatch system.

Admission to flight deck. Section 121.547 specifies who may be admitted to the flight deck of a passenger-carrying airplane. The part 121 section is similar to §135.75 but provides for additional types of persons who may be admitted. FAA proposed that affected commuters comply with part 121. No comments were received concerning this section and the final rule is adopted as proposed.

Flying equipment. Section 121.549(b) requires that each crewmember shall, on each flight, have readily available for his or her use, a flashlight that is in good working order. This is a new requirement for 10- to 30-passenger seat airplanes for co-pilots that was not specifically discussed in Notice No. 95-5. No comments were received and the final rule remains as proposed.

Emergency procedures. Parts 121 and 135 require that, when the certificate holder or PIC knows of conditions that are a hazard to safe operations, the operation must be restricted or suspended until the hazardous conditions are corrected. For a discussion of this issue, see “Emergency Operations (Proposed §§ 119.57 and 119.58)” later in this preamble.

Briefing passengers before takeoff. The FAA proposed to amend §121.571(a) to bring over from §135.117 requirements for additional passenger information for airplanes with no flight attendant. This additional information includes instructions on location of survival equipment, normal and emergency use of oxygen equipment for flights above 12,000 MSL, location and operation of fire extinguishers, and placement of seat backs in an upright position for takeoffs and landings. The FAA proposed that the affected commuters otherwise comply with the part 121 rules on passenger information. The printed cards would need to be revised or supplemented to provide information on flotation cushions or other required flotation devices once these devices are installed.

A small change was proposed for §121.571(a)(3) to allow a flight crewmember (instead of a flight attendant) to provide an individual briefing of a person who may need assistance in the event of an emergency, in cases where an airplane does not have a flight attendant.

Comments: AACA disagrees with the FAA’s cost estimate for the required passenger information cards and briefings. The commenter states that the FAA’s cost estimate appears to be low. Alaskan air carriers would need to devise a more comprehensive information system due to the many nationalities and native languages in Alaska. Many local passengers are not native speakers of English or are not fluent in its comprehension. Briefing cards must be painstakingly translated into many Alaskan Native languages at great expense. Some air carriers have also had to translate into Japanese, Korean, and Russian for tourists from the Pacific Rim nations. Based on experience, the commenter states that the FAA’s assumption of a 3-year life expectancy for information cards is high and that information cards

Now, since the rule is not to be revised immediately and normal wear cycles prevail so that this rule would not impose additional costs.

Oxygen for medical use by passengers. Section 121.574 provides that a certificate holder may allow a passenger to carry and operate equipment for dispensing oxygen if, among other requirements, the equipment is furnished by the certificate holder. The proposal would require affected certificate holders to comply with § 121.574.

Under current § 135.91, the certificate holder may allow a passenger to carry and operate equipment for dispensing oxygen provided certain requirements are met. Section 135.91(d) contains a provision for permitting a noncomplying oxygen bottle provided by medical emergency service personnel to be carried on board the airplane under certain circumstances; this provision was not proposed to be carried forward into part 121.

Comments: AACA states that many medevac operations take place on board scheduled and on-demand flights. Without aviation oxygen available at village health clinics, the flexibility of § 135.91(d) would be lost if it is not carried forward into part 121. AACA recommends allowing a noncomplying oxygen bottle on aircraft operating solely within the State of Alaska. To prohibit this will mean medevac costs will increase and patient transports will have to be done on board charter flights that can originate from a hub point where medical oxygen and stretcher units can be installed on the airplane.

FAA Response: The FAA does not find it necessary to move the language of § 135.91 to § 121.574. The FAA has issued exemptions on this requirement to part 121 certificate holders operating in Alaska.

Alcoholic beverages. Sections 121.575 and 135.121 contain requirements controlling the serving and consumption of alcoholic beverages on the airplane. The requirements are similar except for three minor additional requirements in § 121.575. The FAA proposed that affected commuters comply with the requirements of § 121.575 and since no comments were received on this issue, the final rule is adopted as proposed.

Retention of items of mass. Section 121.576 requires that certificate holders must provide and use a means to prevent each item of galley equipment and each serving cart, when not in use, and each item of crew baggage, which is carried in the crew or passenger compartment, from becoming a hazard. Section 121.577 prohibits a certificate holder from moving an airplane on the surface or taking off unless such items are secure. Sections 135.87 and 135.122 require certificate holders to ensure that such items are secure before takeoff. The FAA proposed that the affected commuters comply with § 121.577, which is substantively the same as § 135.122. No comments were received on this issue and the final rule is adopted as proposed.

Cabin ozone concentration. Section 121.578 sets maximum levels of ozone concentration inside the cabins of transport category airplanes operating above 27,000 feet. The affected commuters do not generally operate at these altitudes. The FAA believes that these rules should apply whenever the altitudes are exceeded. The FAA proposed to amend § 121.578(b) to delete the reference to transport category airplanes.

Comments: Commuter Air Technology states that it does not operate above 25,000 feet. The commenter asks if operation in part 135 now requires ozone monitors and if part 91 flights of 10 or more passengers operated above 27,000 require ozone monitors.

FAA Response: For operations at or below 27,000 feet the ozone requirements do not apply. The answer to both questions of the commenter is no. Part 91 and part 135 do not have ozone provisions. The final rule is the same as proposed.

Minimum altitudes for use of autopilot. Sections 121.579 and 135.93 establish minimum altitudes for use of autopilots. The two sections are similar; however, part 135 does not specify weather requirements for an approach. In a recent NPRM proposing to revise the minimum altitude for use of an autopilot (59 FR 63868, December 9, 1994), which is under consideration, the minimum altitude for autopilot use corresponds to that designated in the type design of the autopilot and stated in the Airplane Flight

and training changes regarding the use of the autopilot.

The above mentioned proposal includes the recommendations of the Aviation Rulemaking Advisory Committee (ARAC). The FAA has proposed in that rulemaking that instead of the 500 ft. minimum stated in the regulations, the autopilot could be engaged at whatever the airplane flight manual says it is capable of (200 ft., 100 ft., etc.). Comments were favorable. If adopted, the results of that separate rule will apply to the affected commuters.

Observer's seat. Section 121.581 requires a certificate holder to make available a seat on the flight deck of each airplane for use by the Administrator while conducting routine inspections. Comparable § 135.75 requires, for inspections, a forward observer's seat on the flight deck or a forward passenger seat with headset or speaker. Because airplanes in the 10- to 30-seat range may not have an observer's seat on the flight deck, the FAA proposed to move the option of providing a forward passenger seat into part 121 and require compliance with part 121 for affected commuter operators. No comments were received regarding this issue and the final rule is adopted as proposed.

Authority to refuse transportation. Section 121.586 prohibits a certificate holder from refusing transportation to a passenger on the basis that the passenger will need the assistance of another person to move quickly to an exit in the event of an emergency unless the certificate holder has established procedures for the carriage of such passengers and the passenger either fails to comply or cannot be carried in accordance with the procedures.

Comments: Commuter Air Technology states that their aircraft has no place for a wheelchair and that the seat opposite the main cabin door has increased pitch which normally accommodates individuals with movement restrictions.

FAA Response: In response to the specific comment, if a certificate holder has no room on board an airplane to handle a wheelchair as carry-on baggage, the wheelchair may be checked as cargo baggage.

The Air Carrier Access Act is implemented in 14 CFR part 382. Aircraft accessibility requirements found in § 382.21 generally exempt aircraft operated under part 121 with fewer than 30 passengers and aircraft operated under part 135. The rule requires that these aircraft comply "to the extent not inconsistent with structural, weight and balance, operational and interior configuration limitations."

The FAA anticipates that affected commuters will establish procedures in accordance with § 121.586. These procedures must be developed in accordance with § 382.21. Since operators under parts 121 and 135 are already in compliance with § 382.21, this rulemaking poses no new requirements other than establishing procedures for the carriage of passengers who may need special assistance in an emergency.

Carry-on baggage: The FAA proposed that the affected commuters comply with the § 121.589 carry-on baggage rule. This would require the preparation and approval of a carry-on baggage program.

Comments: Commuter Air Technology states that its aircraft have no carry-on baggage storage other than for a standard briefcase under the seat. According to the commenter, carry-on baggage is removed from passengers and placed in the pod upon entry. The interior is also placarded to require adequate securing of any interior cargo. AACA is concerned about the cost of a baggage scanning program.

FAA Response: Even if the aircraft allows only limited carry-on baggage, the certificate holder must still have a carry-on baggage program that complies with § 121.589. Interior cargo must be secured in accordance with § 121.285. (See discussion of § 121.285, Carriage of cargo in passenger compartments in this notice.) The final rule revises references in accordance with other changes in this rulemaking. Although affected operators must develop a program for their approved manuals, compliance will not result in any significant substantive operational burden.

Use of certificated airports. For a discussion of the issue of airports certificated under part 139, see section V.H., Airports.

an airplane for VFR operation unless the ceiling and visibility en route, as indicated by available weather reports or forecasts, are and will remain at or above applicable VFR minimums until the airplane arrives at the airport.

Comments: One commenter states that VFR is certainly an acceptable standard for sightseeing operations or for smaller carriers. Scenic Air states that airplanes typically used in the tour business can only operate day VFR. Grand Canyon Airways said 99 percent of its flights are VFR.

An individual states that the proposal on § 121.611 concerning VFR dispatch is unclear as to whether part 135 certificate holders will be required to comply. The commenter believes they should be covered by § 121.611 because it is the safe way and costs nothing.

FAA Response: In the final rule, affected commuters are required to comply with § 121.611. The FAA will develop additional operations specifications paragraphs and guidance for VFR tour operations, remote area operations (e.g. Samoa, Alaska) or other operations that are not capable of being conducted under IFR because they have no airways, IFR approaches, nav aids, etc.

Alternate airport for departure. Section 121.617(a) requires an alternate departure airport during certain weather conditions and specifies that for aircraft having two engines the alternate airport must be not more than one hour from the departure airport at normal cruising speed in still air with one engine inoperative. Under the proposed rule, affected commuters would have to comply with the requirement. This requirement was not specifically discussed in the proposed rule.

Comments: Fairchild Aircraft comments that this requirement requires single-engine cruising speed data that are unlikely to be included in the FAA-approved airplane flight manual of 10–19 passenger airplanes. Comparable § 135.217 requires an alternate airport “within 1 hour’s flying time (at normal cruising speed) in still air.” The commenter requests that the part 135 wording be inserted in the part 121 section.

FAA Response: Fairchild is correct, but the FAA is retaining the requirement and it will be necessary for affected commuters to work with airplane manufacturers to develop appropriate data for normal one-engine inoperative cruising speed for the airplane flight manual within 15 months. (See also section VI.A.4 Airplane limitations: Type of route for discussion of one engine inoperative data).

Operations in icing conditions. No comments were received on this proposal and the final rule is adopted as proposed. (See also VI.A.7. Equipment for operations in icing conditions).

Fuel reserves. Sections 121.639, 121.641, 121.643, and 121.645 contain fuel reserve requirements based on the type of operation to be conducted. These fuel reserve requirements do not distinguish between VFR and IFR operations. Section 121.639 requires 45 minutes of fuel reserve for domestic air carriers and for certain other air carrier operations.

Section 135.209 requires 30 minutes of fuel reserve for day VFR conditions and 45 minutes for night VFR conditions. Section 135.223 requires 45 minutes for IFR conditions.

The FAA proposed to require affected commuters to comply with the fuel reserve requirements of part 121.

Comments: Fairchild Aircraft comments that the FAA failed to take into consideration that § 121.639 requires fuel to fly to an alternate airport regardless of conditions, and finds that the proposed rule would have a detrimental impact economically, with no related gain in safety. Fairchild suggests that the FAA adopt § 135.209, which requires a 30-minute reserve for airplanes with fewer than 31 seats. Samoa Air comments that the proposal would require a 45-minute reserve for flights that average 30 minutes and is therefore unnecessary. Raytheon adds that its aircraft would have to give up one of 19 passengers to carry the additional fuel. Raytheon argues that smaller airplanes make shorter flights than big airliners, can operate to and from shorter runways, and are closer to an alternate airport. Therefore,

A pilot in Alaska comments that the part 135 fuel reserve requirements are adequate and that adding more reserves would degrade the already limited payload of many affected aircraft. Two commenters point out that operations that begin as VFR may end up IFR and that a 45-minute reserve provides more options, than a 30-minute fuel reserve.

Another individual recommends adopting the 45-minute fuel reserve. While it may be argued that there are a greater number of potential alternate airports within 30 minutes flying time of a destination airport that are capable of handling smaller, commuter-type airplanes, some of these potential alternates may not be acceptable from the standpoint of having weather reporting or aircraft rescue and firefighting capability. Additionally, once airborne, fuel time and the 30-minute reserve (some of which is unusable) might pressure some crews into poor operational situations. A standard 45-minute reserve provides more options.

One individual states that commuters can quantify the costs of the additional 15 minutes of fuel reserve, which cannot be significant. The standardization and extra fuel safety margin should be worth the cost.

FAA Response: The FAA recognizes that there are some operations that appear not to require a 45-minute fuel reserve. One of these is the flight that only takes 30 minutes. The logical solution would be to carry 30 minutes of reserve fuel so that, at worst, the airplane could return to its airport of origin. However, in some circumstances, such as the sudden occurrence of bad weather, returning may not be possible. Therefore, the FAA agrees with commenters who point out that a 45-minute fuel reserve provides more options.

The FAA also acknowledges that for some airplanes the additional fuel may require the loss of a passenger seat and the FAA recognizes the burden of the 45-minute reserve. Accordingly, the FAA is allowing relief in the final rule for those who operate day VFR per operations specifications. However, the FAA retains the requirement for a 45-minute reserve whenever on an IFR flight plan, including under VFR conditions. The special rule allows relief to those who are truly VFR such as air tour operators and certain Alaskan operations. The relief applies only to 10–19 passenger seat operators with airplanes certificated after 1964. These smaller airplanes have more flexibility in VFR to find a suitable landing airport. This flexibility provides functional equivalency to part 121.

VIA.15 Subpart V—Records and Reports

Subpart V prescribes requirements for the preparation and maintenance of records and reports for all certificate holders operating under part 121. Although many of the requirements are identical to or similar to the recordkeeping requirements in §§ 135.63 and 135.65, part 121 requires additional information, including new records and reports. Notice 95–5 proposed that affected commuters comply with the recordkeeping requirements of part 121.

Comments: Jetstream supports the application of subpart V to affected commuter operations.

RAA and ASA point out that § 121.715 on in-flight medical emergency reports is an obsolete requirement that should be eliminated. These commenters also contend that § 121.711 on retention of communication records would require affected commuters to record each enroute radio contact and keep the record for 30 days. According to these commenters, recent interpretations of this requirement have caused some certificate holders to establish elaborate recording systems. The commenters question the need for these records and suggest that the requirement be eliminated if it no longer serves a useful purpose.

FAA Response: The FAA agrees with commenters that § 121.715, relating to inflight medical emergencies, is obsolete and it has been deleted in the final rule. The commenters are correct that § 121.711 requires certificate holders to record each en route radio contact and keep the record for 30 days. This requirement is necessary for all certificate holders and has been retained in the final rule.

for comment because of the length of time since the first NPRM, the number of changes that were made to the proposed text, and the significance of the changes to part 119 that resulted from the review of commuter operations. Each section of part 119 that had been changed since the previous notices was explained in the preamble to Notice 95-5.

The first objective of part 119 is to establish a permanent guide in a new part that will enable persons who provide transportation of people or cargo to determine what certification, operations, maintenance, and other regulatory requirements they must comply with. A second objective is to set out procedural requirements for the certification process that apply to all certificate holders conducting operations under part 121 or part 135.

Part 119 accomplishes the following:

- (1) Incorporates much of SFAR 38-2 as Subparts A and B;
- (2) Revises certification procedures now in parts 121 and 135 and consolidates them as Subpart C;
- (3) Revises wet leasing requirements;
- (4) Provides definitions for terms such as "direct air carrier" and "kind of operation," and clarifies the requirements for operations specifications by adding definitions for terms such as "domestic operation" and "supplemental operation;"
- (5) Provides a roadmap for certificate holders to lead them to the operating rules in part 121, 125, or 135 that they must comply with for the kind of operations that they conduct;
- (6) Adds a new requirement for a Director of Safety; adds management requirements for domestic and flag operations conducted under part 121 consistent with those that now exist for supplemental operations conducted under part 121; and consolidates part 121 and part 135 management requirements;
- (7) Rescinds part 127 and any requirements that pertain solely to helicopters in part 121, Subparts A through D; and
- (8) Throughout part 121, Subparts A through D, and part 135, Subpart A, changes various references from CAB requirements to DOT requirements, changes terminology where needed, and makes incidental editorial changes.

Comments on Part 119

This section contains a summary and a response to the comments received on specific sections of part 119.

General Comments on part 119. USAir Express expresses concern over the 7-year time lag between when part 119 was originally introduced and the issuance of Notice 95-5. This commenter suggests that since many changes have occurred in the air industry and in the FAA, it may be best to issue subparts A and B of part 119, but to leave the requirements in subpart C in their current form in parts 121 and 135. NATA similarly contends that "the unknown effects of the requirements contained in part 119 are not adequately considered in Notice 95-5's cost-benefit analysis." Both of these commenters believe that the new requirements in part 119 impose unnecessary administrative burdens for certificate holders.

FAA Response: The FAA disagrees with the arguments presented by the commenters. For the most part, subchapter C is a recodification of the existing part 121 and 135 certification requirements for applicants for air carrier or operating certificates. In some instances, such as wet leases under § 119.53, recency of operation under § 119.63, and management personnel under §§ 119.65 and 119.67, where substantive changes are made, further discussion is contained elsewhere in this preamble.

General comments on definitions. There were several comments on the lack of definitions for certain terms in the proposed rule, and, in some cases, the lack of distinctions drawn among certain terms. Helicopter Association International (HAI) cites the lack of a definition for "common carrier," saying that it is hard to understand the difference between this and the "noncommon carrier." One commenter recommends that "nonscheduled operations" should substitute for "on-demand operations" and "supplemental operations" and that "scheduled operations" should replace the words "domestic," "flag," and "commuter" in order to simplify and standardize the regulations. Additionally, whenever the phrase "flag operations" needs to be distinguished, "scheduled foreign operations" could be used instead. Further, this commenter suggests that "since the term 'scheduled' now means any scheduled flight, there would be no need to define it, as the five round trips per week definition has been dropped."

FAA Response: The FAA disagrees with the comment that "scheduled" and "nonscheduled" should be substituted for the terms "domestic," "flag," "commuter," "supplemental," and "on-demand." These are five distinct kinds of operations that the FAA needs to identify and regulate separately according to the characteristics of each kind of operation and the terms are presently used throughout the regulations. Also, the "five round trips per week" concept has been reinstated for commuter operations with 9 or fewer passengers, as discussed in section V.B., Applicability.

"Common carrier" is a term that has been discussed in numerous court cases. "Non common carriage" is being defined in § 119.3.

"All-cargo operations". Proposed § 119.3 defines "all-cargo operation" to mean any operation for compensation or hire that is other than a passenger-carrying operation. These operations follow the rules for on-demand or supplemental operations, regardless of whether the all-cargo operation is conducted on a regular, "scheduled" basis.

Comments: ALPA proposes that the FAA should discontinue the distinction between scheduled passenger and scheduled all-cargo operations and reserve that distinction for the nonscheduled all-cargo operation because there is little difference between the scheduled passenger and scheduled all-cargo operations.

FAA Response: The FAA has considered ALPA's suggestion; however, it is outside the scope of this rulemaking. However, the definition has been slightly modified so that passengers described in §§ 121.583(a) and 135.85 can be carried without the operation losing its all-cargo status.

"Commuter operations". The proposed definition for "commuter operations" limits the use of this term to scheduled operations in airplanes having 9 or less passenger seats or in any size rotorcraft.

Comments: Fairchild Aircraft states that applying the term "commuter operations" to operations with 9 or fewer passenger seats or to rotorcraft is inappropriate because this use of the term differs from the generally accepted meaning, i.e. frequent service over short stage lengths and service to small communities. According to the commenter, under this proposed definition, commuter category airplanes will no longer be used in commuter operations. The commenter also states that the proposed definition is inconsistent with the use of the term "commuter operator" in part 93. The commenter suggests that a new term be invented for scheduled operations with 9 or fewer passenger seats or rotorcraft.

FAA Response: As was discussed in Notice 95-5 and earlier in this preamble, the term "commuter" is presently used in several different ways. The FAA agrees with the commenter that the proposed definition does not accommodate all of the different uses of the term "commuter." However, operators of aircraft with 9 or fewer passengers do provide frequent service over short stage lengths and service to small communities. Therefore, the term is appropriate for these operations. The FAA acknowledges that this definition differs from the definition of "commuter operator" in part 93 and from the DOT definition. That inconsistency will continue.

"Domestic operation". Proposed § 119.3 defines "domestic operation" to mean any scheduled operation in specified airplanes "between any points within the 48 contiguous States of the United States or the

“Flag operation”. Proposed § 119.3 defined “flag operation” to mean a scheduled operation conducted in specified airplanes “between any point within the State of Alaska or the State of Hawaii or any territory or possession of the United States and any point outside the State of Alaska or the State of Hawaii or any territory or possession of the United States, respectively” (2)(i); or “between any point within the 48 contiguous States of the United States or the District of Columbia and any point outside the 48 contiguous States or the District of Columbia (2)(ii).

Comments: AACA comments that currently Alaskan operations conducted under part 121 are conducted under the flag rules of part 121. According to the commenter, a number of Alaska operators currently hold operating authority and operations specifications to fly scheduled or charter service to Canada, and to the Commonwealth of Independent States (the Russian Federation). The commenter states that the rulemaking should clarify what operating rules are to be used for operations that previously operated solely under flag rules. According to the commenter, since most of the flights to the Russian Federation are on-demand, the impact of part 119 on these flights needs to be thoroughly analyzed.

FAA Response: Other than minor changes, the proposed definition of “flag operations” remains in the final rule as proposed. Accordingly, scheduled operations conducted under part 121 between a point in Alaska to a point outside of Alaska will be considered flag operations. Scheduled operations between a point in Alaska and another point in Alaska will be considered domestic operations. In fact, scheduled operations from one point in Alaska (or any other state) to the same point are considered domestic operations. Nonscheduled operations, whether between points within Alaska or between a point in Alaska and a point outside of Alaska, will be considered supplemental operations or on-demand.

One minor change in the definition adds operations between two foreign points to the list of locations included as flag operations.

“Maximum payload capacity”. The proposed definition for “maximum payload capacity” is the same as the one currently used in SFAR 38-2, except for the allowances for determining the standard average weights for crewmembers.

Comments: GAMA comments that the standard oil allowance of 350 pounds found in the definition of “maximum payload capacity” should be changed to coincide with the type certificated oil value. The commenter points out that the 350 pound value greatly exceeds any value found among present and future 10-19 passenger commuter airplane designs. Fairchild suggests that the definition refer to “full oil” and that the specific 350 pound allowance should be deleted. RAA states that the definition uses obsolete values for minimum oil and fuel and recommends that the FAA eliminate the distinction in the definition between aircraft with and without a maximum zero fuel weight and eliminate specific minimum weights for crewmembers, oil, and fuel.

FAA Response: In response to comments on the standard oil allowance, the FAA has revised the standard oil allowance in the definition of “maximum payload capacity” to add: “or the oil capacity as specified on the Type Certificate Data Sheet.” The FAA did not eliminate specific weights for crewmembers, oil, and fuel from the definition, as requested by commenters, because these weights are necessary guidelines for determining maximum payload capacity. They are not operational weight values but are used merely to establish the air operator certification and operation requirements for all-cargo and combination of cargo and passenger aircraft. This definition is not used in the computation of weight and balance.

“On-demand operation” and “Supplemental operation”. The definitions of “on-demand operation” and “supplemental operation” were rewritten for Notice 95-5 to make it clearer which operations fall into these categories. The proposed definitions did not change significantly from current rules or from the original 1988 NPRM, except for one important difference. Notice 95-5 does not change the basic dividing line between on-demand and supplemental operations. A configuration of more than 30 passenger seats or a payload capacity of more than 7,500 pounds is a supplemental operation, while a configuration of 30 or less passenger seats and a payload of capacity of 7,500 pounds or less is an on-demand

back and forth between parts without a major investment of time and resources by both the certificate holder and the FAA. Switching between parts entails many things, including airplane conformity checks, equipment checks, and record checks. These are all necessary checks that the FAA must perform to fulfill its safety oversight function.

Section 119.5—Certifications, Authorizations, and Prohibitions. This section identifies the type of certificate (air carrier or operating) the Administrator issues to certificate holders, depending on the nature of their operations, and specifies certain authorizations and prohibitions associated with those certificates for specific types of certificate holders.

Comments: A commenter claims that the distinction between the air carrier certificate and the operating certificate is ambiguous. He poses two questions: “Why would we prohibit a 737, 121 certificated, intrastate, common carriage operator (who presumably would have an operating certificate) from engaging in other common carrier operations?” The second question is “why would we prohibit a part 121 common carriage operator with an air carrier certificate from providing non-common carriage?”

FAA Response: An intrastate common carrier who wishes to conduct interstate operations must first obtain economic authority to conduct those operations from the Department of Transportation. Once that authority is granted, the FAA would issue an air carrier certificate to that operator if the FAA concluded that the operator could safely conduct those operations. In regard to the distinction between common carriage and noncommon carriage, the essential difference is the presence or absence of a holding out. The FAA believes that an operator engaged in common carriage (holding out) cannot unequivocally claim that it can engage in a noncommon carriage operation that would not have benefited from the holding out activities of the common carriage operation.

Section 119.7—Operations Specifications. In § 119.7 the FAA proposed identifying items that must be contained in each certificate holder’s operations specifications. No comments were received on this issue and the final rule is adopted as proposed.

Section 119.9—Use of Business Names. In this section, the FAA proposed to prohibit certificate holders that operate airplanes under part 121 or 135 from using a business name other than the name appearing in a certificate holder’s operations specifications. The FAA proposed that the name of the certificate holder conducting the operation must be displayed on the airplane and clearly visible and readable to a person standing on the ground at any time except during flight time, and that the means of displaying the name must be acceptable to the Administrator.

Comments: Gulfstream Air, NATA, RAA, SP Aircraft, and two individuals address the requirement to have the certificate holder’s name on the aircraft. Four recommend that the requirement not apply to on-demand operations. One opposes the requirement because, as an on-demand operator, his customers often do not want the name of an airline appearing on the aircraft, but rather prefer to arrive in what is believed to be their corporate aircraft. One commenter supports the proposal but recommends that the name of the certificate holder should be near to and visible from the main cabin entry door, not just anywhere on the aircraft. Commenters request clarification of “clearly readable and visible” since this could imply that very large letters must be used. Also, three commenters indicate that the phrase “acceptable to the Administrator” needs to be defined.

FAA Response: The purpose of this requirement is for the FAA to be able to identify, primarily for purposes of ramp inspections, those who appear to have operational control of the airplane. Some carriers use names for their businesses other than their corporate name. These are often called “doing-business-as” or “DBA” names. All of a certificate holder’s DBA names must be listed in its operations specifications. A certificate holder may also paint a DBA name on the outside of the aircraft. However, in order to be in compliance with this section, the certificate holder’s name must also appear on the outside of the aircraft.

Because this regulation applies to airplanes ranging in size from a small reciprocating-engine-powered airplane to a Boeing 747, it is not practical for the FAA to define the size letters that would be

under part 135. Section 119.21(a)(3) states that the Administrator may authorize or require that (1) Certain certificate holders conducting supplemental operations between airports that are also served by the air carrier's domestic or flag operations, conduct those operations under the domestic or flag rules; and (2) certain all-cargo operations that regularly and frequently serve the same two airports may be required to be conducted under the domestic or flag rules.

Comments: The National Air Carrier Association (NACA) recommends deleting "or require" in the second sentence of proposed § 119.21(a)(3). The language goes far beyond the current language of SFAR 38-2.4(a)(3) or part 121 in its application to supplemental passenger operations conducted "between points that are also served by the certificate holder's domestic or flag operations." The preamble does not provide sufficient explanation or justification to require the application of domestic or flag operating requirements to supplemental passenger operations that are operated over routes where an operator also has domestic or flag operations. There are sufficient economic and operational safeguards already in place to preclude abuse. NACA believes that what "may be required" will quickly become "what is required," with the FAA unilaterally imposing the requirement to operate certain nonscheduled passenger operations under domestic or flag rules. There is no safety or accident history to justify more restrictive regulations. NACA concurs that frequency of service between a pair of points should not be the criterion for determining which rules apply.

FAA Response: The FAA concurs with the comments from NACA on the wording of the rule and the words "or require" have been removed in the final rule.

Section 119.25—Rotorcraft operations. Section 119.25 directs that all rotorcraft operations be conducted under part 135 regardless of the size or seating capacity of the rotorcraft. However, external-load operators and agricultural aircraft operators must comply with part 133 or part 137 of the FAR, respectively.

Notice 95-5 proposed to rescind part 127 because rotorcraft operators that previously operated under part 127 are directed in § 119.25 to conduct those operations under part 135. Part 135 has been more recently updated and, therefore, provides a more appropriate level of safety for rotorcraft operators than part 127.

Comments: HAI opposes removing part 127 at this time. HAI supports a review and update of this part in the future, but states that to simply remove this part now would be to allow the certificate-issuing district office unlimited discretionary powers in the design of appropriate operations specifications.

FAA Response: Part 127 is not a current part because SFAR 38-2 directed all rotorcraft operators to conduct their operations under part 135. Appropriate operations specifications for each certificate holder operating either airplanes or any size rotorcraft are developed by FAA Headquarters. The standard paragraphs are completely designed by Headquarters, while nonstandard paragraphs are reviewed and concurred on by Headquarters. Therefore, the certificate-holding district office does not have unlimited discretionary powers.

Section 119.33—General requirements. In § 119.33 the FAA proposed that applicants for certificates be required to conduct the proving tests required for certification under the appropriate requirements of part 121 or part 135. The purpose of the tests is to demonstrate (as one of the last steps in the certification process) that the applicant is qualified and eligible to receive a certificate. The change permits applicants to complete the certification process without having to obtain either a deviation or certification to conduct operations under part 125. The FAA also proposed to amend §§ 121.163, 125.1, and 135.145 to make the proving test requirements consistent in those parts. No comments were received on these § 119.33 issues and the final rule is adopted as proposed.

Section 119.35—Certificate application. This section requires a certificate applicant to submit the application 90 days prior to the intended date of operation instead of the current standard of 60 days. This length of time accounts for the actual amount of time required by the FAA to properly process applications and to allow for agency documentation in the formal review period.

operators of on demand service since this requirement has not been proposed before now, and no explanation was provided for it in Notice 95-5. This commenter shares the concern that the reporting of financial records would in no way enhance the safety of operations that the FAA claims this proposal serves. Additionally, the commenter criticizes the requirement for insurance in that requiring the applicant to have insurance prior to submitting the application is an unnecessary burden due to the uncertain time span before application and review is complete. Thus, it recommends requiring that insurance should be in place before operations begin.

Fairchild Aircraft comments that § 119.35 fails to define the requirements for submitting detailed financial data, and recommends that the FAA establish the minimum qualifications that must be met under part 119, subpart C.

FAA Response: The financial reporting requirements in § 119.35(c) through (h) apply only to persons who are not air carriers, commonly called "commercial operators," and who are applying for authority to engage in intrastate common carriage but have not undergone a fitness review by the Department of Transportation. The rule language has been updated to make it consistent with new definitions and certification requirements applicable to these operators. For persons applying for authority to conduct intrastate common carriage operations under part 135 these would be new requirements, as commenters point out. The FAA believes these requirements are necessary because financial information, management information, and information concerning who controls the certificate holder can reveal potential shortcomings on the applicant's ability to conduct a safe operation. The requirement for insurance information in § 119.35(h)(7) provides that the applicant report the period of coverage, not that it be in effect before the application is submitted. Therefore the date that insurance coverage begins can be coordinated with the estimated date that operations begin. In order to make it clear that § 119.35 (c) through (h) apply only to applicants who are commercial operators, the final rule includes cross references within paragraphs (c) through (h), and paragraphs (g) and (h) have been switched.

Section 119.41—Amending a certificate. FAA proposed new procedures for making changes to the operating certificate. These procedures, modeled after 49 U.S.C. § 44709 and similar to the procedures used to amend operations specifications, would standardize the amendment process. Applications for amendments to certificates would have to be submitted 15 days in advance of the time the operator wants the amendments to be effective, unless the Administrator approves a shorter period when circumstances warrant. No comments were received on this issue and the final rule is adopted as proposed.

Section 119.47—Maintaining a principal base of operations, main operations base, and main maintenance base; change of address. Section 119.47 requires that a certificate holder maintain a principal base of operations and allows the certificate holder to establish a main operation and main maintenance base. Written notification must be provided to the certificate-holding district office before establishing or relocating a principal base of operation, a main operations base, or a main maintenance base. The proposed terminology clarified that the FAA needs to know the location of the primary point of contact between the FAA and the certificate holder. Certificate holders would no longer be required to report changes of address for business offices. No comments were received on this issue and the final rule is adopted as proposed.

Section 119.49—Contents of operations specifications. Section 119.49 requires that each certificate holder obtain operations specifications that list other business names under which the certificate holder may operate. Under part 121, there are no restrictions on the use of alternate business names on their operating certificates. Part 135 currently requires certificate holders to list their alternate business names on their operating certificates. The FAA proposed to require that alternate business names be shown on the operations specifications rather than on the operating certificate. No comments were received on this issue and the final rule is adopted as proposed.

Section 119.49 adds the requirement that operations specifications contain a reference to the economic authority issued by the OST. The economic authority issued by the OST is not a new requirement;

operations specifications would have to be submitted 15 days in advance for minor or routine amendments; however the FAA proposed to require that certificate holders file applications to amend operations specifications at least 90 days before the date proposed by the applicant for the amendment to become effective in cases of mergers; acquisition or airline operational assets that require an additional showing of safety (e.g., proving tests); changes in the kind of operation as defined in §119.3; resumption of operations following a suspension of operations as a result of bankruptcy actions; or the initial introduction of aircraft not before proven for use in air carrier or commercial operator operations. It has been the FAA's experience that these types of major changes do take at least 90 days for the agency to determine that, as a result of the change, the applicant is properly and adequately equipped and is able to conduct a safe operation.

Under § 119.51(b), if the Administrator initiates an amendment to operations specifications, the certificate holder would have 7 days to submit written information or arguments on the amendment.

Under § 119.51(d), a certificate holder may petition for reconsideration of a decision on an amendment to operations specifications. If the amendment is not related to an emergency situation, the petition suspends the effectiveness of the amendment.

Comments: USAIR Express, RAA, Mesa, ASA address the required lead times proposed for making either desired or directed changes to operations specifications. Commenters state that the proposed requirements to file an air carrier-desired operations specifications change 90 days before the effective date is excessive. Additionally, the requirement to respond to changes in operations specifications within 7 days when directed by the Administrator and complete implementation within 30 days is unreasonable.

An individual, ASA, and RAA indicate that the proposed language in § 119.51(d) would not permit the continuation of the practice of staying the effectiveness of an amendment when an air carrier submits a petition for reconsideration. The commenters recommend that the petition for reconsideration stay the effective date of an amendment pending the final review of the petition.

FAA Response: In response to comments that a request to change operations specifications must be filed 90 days in advance of the desired effective date, the FAA will add "unless a shorter time is approved" to § 119.51(c)(1)(i) so as not to imply that a carrier must allow the full 90 days. The rest of paragraph (c) reflects current part 121 and part 135 language and is adopted as proposed.

Since § 119.51(d)(3) clearly states that, if a petition for reconsideration is filed within 30 days and if no emergency situation exists, the effectiveness of an amendment to operations specifications issued by the certificate-holding district office is stayed pending final review of the petition. The procedures for emergency situations, spelled out in paragraph (e), are not substantially different than currently found in §§ 121.79 and 135.17. Therefore there will be no changes to current procedures as a result of new § 119.51 (d) and (e).

Section 119.53—Wet leasing of aircraft and other transportation by air arrangements. Proposed § 119.53 on wet leasing would be revised from current § 121.6 to do the following: (1) clarify that the leasing requirements pertain only to wet leasing (which is defined in § 119.3 as a lease of an aircraft that includes the provision of any crewmember); (2) extend the wet leasing requirements to part 135 operations; (3) prohibit a wet lease from a foreign air carrier or any other foreign person; (4) prohibit a wet lease from any person not authorized to engage in common carriage; (5) specify that the Administrator, upon approval of the wet lease, would determine which party to the agreement has operational control and would amend the appropriate operations specifications of both parties, if necessary; and (6) allow a wet lease charter flight to transport passengers who are stranded because of the cancellation of their scheduled flight, provided that the wet lease flight is authorized by OST or the Administrator, as applicable, and that the charter flight is conducted under the rules applicable to a supplemental or on-demand operation. These clarifications reflect for the most part current administrative procedures.

Comments: NACA proposes reorganization of § 119.53, including a new paragraph regarding operations specifications for short term wet leases (short term substitute service) that could occur without prior

competitive relationships between carriers in an international market. Japan Airlines agrees with British Airways' point and adds that this "discriminatory" prohibition contradicts the Department of Transportation's economic regulations providing for wet leasing of aircraft by foreign air carriers to U.S. air carriers. Japan Airlines argues that foreign air carriers are permitted to operate aircraft in the U.S. only if they meet rigorous requirements of part 129 of the FAA regulations, which would imply that these aircraft are safe. Japan Airlines also claims that this regulation might be contrary to a friendship treaty between the United States and Japan. The company suggests that the FAA address any specific foreign carrier safety concerns with something other than a blanket prohibition of the type proposed.

FAA Response: The changes to current requirements for wet leasing in § 119.53 codify existing FAA policy on wet leasing. The FAA requires operators conducting wet leasing operations to hold operations specifications for the same kind of operation as that being conducted in order to be sure that the operator is qualified to conduct that kind of operation. Since foreign air carriers may conduct operations only under part 129, they do not hold operations specifications for current part 121 or part 135 certificate holders and, therefore, may not conduct wet leasing operations for part 121 or part 135 certificate holders. The FAA is considering NACA's suggestion regarding short term wet leasing and intends to request that ARAC develop recommendations on this issue. Regulatory language is amended to allow short notice wet lease operations to be conducted prior to providing information required by § 119.53(c).

Section 119.55—Obtaining deviation authority to perform operations under a U.S. military contract. Proposed § 119.55 establishes a new procedure to obtain deviation authority to perform under a U.S. military contract. This would require the certificate holder to submit this deviation authority request to DOD's Air Mobility Command (AMC), who would review the request and, in turn, forward it and the AMC recommendation on to the FAA for final review. The logic behind having the AMC review this is to provide an additional, and more efficient, evaluation by a more qualified authority on the needs of the military operation.

Comments: One commenter expresses concern about the FAA's need to have the AMC serve as an extra check on FAA knowledge of deviation authority. The commenter states that adding another agency to the process does not serve the interest of readiness, for during military operations, the demands from the military come "fast and furious with many changes."

FAA Response: As the FAA explained in Notice 95-5, during the Desert Shield/Desert Storm operations, the agency was inundated with requests for deviations. The AMC has the resources to consolidate these requests, identify the specific regulations from which relief is sought, and evaluate the requests to determine whether the relief sought would be needed to accomplish the military mission. This procedure will enable the agency to process these requests more efficiently, should the need arise in the future.

Emergency Operations (§§ 119.57 & 119.58). These two proposed new sections generally recodify §§ 121.57(c), 121.557, 121.559, and 135.19. Section 119.57 addresses emergency situations where it is impossible for the certificate holder who intends to conduct emergency operations to act without thorough and complex planning, such as during natural disasters like floods or earthquakes. Section 119.58 is tailored to emergency operations where thorough and complex planning are inherently impossible due to the critical issue of time and the nature of the emergency.

Comments: Three commenters express concern about this proposed section. One of the commenters believes that this consolidation of two related yet distinct categories would cause confusion: "Section 119.57 relates to certificate authority to conduct certain operations on an emergency approval basis, while § 119.58 relates to emergency operational situations that may require emergency deviation from prescribed procedures and methods, weather minimums, and FARs to the extent required for *flight safety*." The commenter recommends renaming § 119.57 to read "Obtaining Emergency Deviation Authority to Perform Unapproved Operations" and § 119.58 to be "Operational Emergencies Requiring Immediate Decision and Action." Additionally, the commenter expresses concern that § 119.58(b) needs to be modified to more clearly reflect dispatcher capability/responsibility, joint responsibility, and a cross-check mechanism to ensure critical operational decisions are not made at the exclusion of safety.

FAA Response: The FAA accepts the commenters' suggestions. The FAA will retain § 119.57 in final part 119. Instead §§ 121.557, 121.559 and 135.19 will be retained in parts 121 and 135. However, the substance of proposed § 119.57 on obtaining deviation authority for certain emergency operations does not appear in current part 121 or part 135. Therefore, this section is retained in the final rule. This new section will provide procedures for such situations as the recent hurricane in the U.S. Virgin Islands. Deviation authority was needed in order to allow rescue and supply flights into and out of damaged airports.

Section 119.59—Conducting tests and inspections. In § 119.59, the FAA proposed language to emphasize both the authority of FAA inspectors to gain access to a certificate holder's books and records and the fact that a certificate holder risks suspension of part or all of its operations specifications if it fails to provide that access. Without access to those records, the FAA cannot fulfill its safety mission. No comments were received on this issue and the final rule is adopted as proposed.

Section 119.61—Duration of certificate and operations specifications. Section 119.61 sets out the conditions under which certificates or operations specifications become ineffective.

Comments: Two commenters recommend that when operations specifications are changed or superseded, the carrier should be required to surrender the obsolete copies to the FAA. This would preclude the chance of outdated operations specifications being in the hands of the "field operators."

FAA Response: It is the responsibility of the certificate holder to have procedures in place to ensure that the most current copies of the operations specifications are adequately and accurately distributed. The FAA is not requiring that outdated operations specifications be surrendered to the FAA because of the administrative burden that such a requirement would entail. However, the FAA has decided to incorporate into § 119.61 a new paragraph (c), which contains the § 135.35 language for surrender of operations specifications and certificate if a certificate holder terminates business.

Section 119.63—Recency of operation. Proposed § 119.63 would prohibit a certificate holder from conducting a kind of operation if that kind of operation has not been conducted for a period of 30 consecutive days. The certificate holder must advise the Administrator at least 5 consecutive calendar days prior to resumption of that kind of operation and make itself available for any FAA reexamination that the FAA considers necessary.

Comments: Eight commenters address this proposed requirement. One says that 30 days is too short a period and recommends a 6–12 month period. NACA recommends a 6-month period. Comair comments that the requirement is burdensome to active air carriers wanting to conduct supplemental operations; this commenter says that the requirement should be changed to apply to certificate holders or air carriers who have not conducted *any* operations, not just a particular kind of operation, in the previous 30 calendar days. A similar comment is made by another individual. NACA comments that this requirement is burdensome to air carriers conducting any type of operation (domestic, flag, or supplemental), especially to carriers who provide these services under short-term, short notice wet leases. USAir Express states that the proposed rule would seriously impact the ability of part 121 domestic and flag operators to conduct occasional supplemental operations since these operations are often required on less than 5 days notice. Also, since many part 121 certificate holders conduct their supplemental operations using the same procedures as their scheduled operations, there is no benefit from this requirement. SP Aircraft says that the requirement would be burdensome to on-demand small aircraft operators and to the FAA and that the rule should provide relief for these certificate holders.

Mesa and RAA point out that the proposed rule is unclear in its use of the term "kind of operation" and recommend that the FAA define this term.

FAA Response: In response to comments, the FAA has made the following changes to § 119.63 in the final rule:

If part 121 and part 135 scheduled operators do not conduct scheduled operations for more than 30 days, the 5-day notification provision would apply. For part 121 and 135 scheduled operators, no

Management Requirements (Proposed sections 119.65 through 119.71). Notice 95-5 proposed to consolidate management personnel requirements for operations conducted under part 135 or part 121 into new part 119 and to apply management personnel requirements to domestic and flag operations. The management personnel requirements for operations conducted under part 135 (§§ 119.69 and 119.71) would be substantially the same as those currently in §§ 135.37 and 135.39. The management personnel requirements for operations conducted under part 121 (§§ 119.65 and 119.67) would be similar to those currently in §§ 121.59 and 121.61, which now apply only to supplemental operations.

The only significant changes under the proposed management requirements for part 121 and part 135 are as follows:

Director of safety. The FAA proposed that each certificate holder that conducts operations under part 121 must have a director of safety. This person would be responsible for keeping the highest management officials of the certificate holder fully informed about the safety status of the certificate holder's entire operation. The FAA believes that an independent, full time position is important if at all available or possible. However, it recognizes that in smaller operations, the director of safety function may be an additional function of a current manager. Section 119.65(b) provides flexibility in the requirements for positions and number of positions for management personnel, including the director of safety.

Director of operations. The FAA proposed for § 119.67(a) to require a director of operations to have both 3 years experience as a PIC of an aircraft under part 121 or part 135 and 3 years supervisory experience in a position that exercised control over any operations conducted with aircraft under part 121 or part 135.

In the case of a person becoming a director of operations for the first time, the FAA proposed that the PIC experience in large aircraft be recent, i.e., 3 years of experience within the past 6 years. (See proposed § 119.67(a)(3)(i).) Additionally, for all directors of operation under part 121, the minimum of 3 years of supervisory or managerial experience must have been obtained within the last 6 years. (See proposed § 119.67(a)(2).)

Additionally, for operations conducted under part 135, the FAA proposed that the director of operations have the following experience:

(1) At least 3 years of supervisory or managerial experience within the last 6 years, in a position that exercised operational control over any operations conducted under part 121 or part 135; or

(2) For a person with previous experience as a director of operations, at least 3 years experience as a PIC of aircraft operated under part 121 or part 135; or for a person becoming a director of operations for the first time, the 3 years of PIC experience must have been obtained within the past 6 years.

Director of maintenance. To standardize the certificates required for the director of maintenance, proposed § 119.67(c) and 119.71(e) would require that a director of maintenance hold a current mechanic certificate with both airframe and powerplant ratings.

Also, the requirement in present § 135.39(c) that the required experience in maintaining aircraft must include the recency requirements of § 65.83 has been added to proposed § 119.67(c) and carried over to proposed § 119.71(e).

Chief pilot. Proposed § 119.71(c)(1) and (d)(1) omitted the word "current" from existing § 135.39(b)(1) and (b)(2) because these pilot certificates no longer have an expiration date and are revoked only for cause. The words "and be qualified to serve as PIC in at least one type of aircraft used in the certificate holder's operation" are added to clarify that the chief pilot must meet recency of experience requirements and medical requirements.

In addition to holding the appropriate certificate, in order to be eligible to be a chief pilot in part 121 or 135 operations, a person must have at least 3 years experience as a PIC of aircraft operated

ATP certificate, commercial pilot certificate, airframe and powerplant certificate), the deviation authority sections would not cover such a lack of airman certification situation. The deviation authority provides a means for competent and qualified personnel who do not meet the management personnel qualifications to be employed in required positions.

Comments: A number of commenters responded to the proposed management requirements for part 119. These are discussed below.

Director of Safety. United Express comments that the creation of the director of safety position is in the best interest of the flying public but that the position's responsibilities will depend on airline size, equipment, and type of operations. This commenter says that for small certificate holders, the chief pilot or current director of operations could assume the duties. United Express also says that this position should qualify under current § 121.61.

NTSB and several other commenters say that the director of safety should be independent from operational functions and have direct access to the highest levels of management.

ALPA recommends that in code-sharing operations, the director of safety should report directly to the mainline Safety Vice President; if a code sharer does not have a director of safety, then code-sharing pilots should have access to the mainline safety organization. ALPA also recommends that the director of safety maintain a toll free telephone hotline. In addition, ALPA recommends that the director of safety's qualifications include at least 3 years of supervisory experience and possession of one of the following: an Airline Transport Pilot (ATP) license, Airframe and Powerplant (A & P) license or Dispatcher license, or demonstration of other approved equivalent aeronautical training.

Fairchild states that a separate director of safety position is unnecessarily burdensome and that safety is a concern of all managers. This commenter recommends changing § 119.65(a) so that the director of safety is not required to be a full-time position.

Comair, ASA, Gulfstream, and RAA say that § 119.67 does not provide any qualification requirements for the director of safety. These commenters request that the FAA permit certificate holders to designate directors of safety based upon their needs and without an FAA approval process.

Big Sky Airlines and NATA recommend that smaller certificate holders be allowed to combine the director of safety position with an already existing position. Metro International Airways also points out the burden of this requirement on small certificate holders (e.g., those with 10-15 employees or one or two aircraft). This commenter recommends that these certificate holders be allowed to determine which management personnel, especially the director of safety and chief inspector, are needed and to combine these and other positions as well.

One commenter recommends that smaller operations be permitted to employ contracted or part-time safety officers who could act for more than one carrier. This could reduce these certificate holders' financial burden associated with hiring additional personnel.

One commenter recommends that the director of safety have direct communication paths with dispatch, maintenance, flight attendant, and ground operations.

Samoa Air also points out that the requirement for additional management personnel for certificate holders with three or fewer aircraft is burdensome and that a proper internal evaluation program should keep management informed of the certificate holder's safety status.

One commenter says that § 119.69 does not require a part 135 certificate holder to have a director of safety and that this position should be required for these certificate holders.

One commenter recommends that the director of safety be excluded from enforcement action similar to the Aviation Safety Reporting System under § 91.25.

the management of large carriers is more complex, involving knowledge of such areas as labor relations, legal issues, finance, and quality assurance. To assume that these subjects can be mastered while also obtaining the required number of years of experience for each management position is unrealistic. Finally, this commenter objects to the explanation of deviation authority regarding the allowance of unlicensed persons to hold management positions and says that it is inconsistent with the language of the proposed rule itself.

Fairchild Aircraft finds § 119.67 to be more stringent than its corresponding section in part 121 (§ 121.61). This commenter suggests that § 119.67(a)(1) be changed to allow the director of operations to hold or *have held* an ATP certificate and also to delete the words "large aircraft" in order to recognize that not all former part 135 certificate holders have been operating large airplanes.

RAA and many other commenters support "grandfathering" existing key management personnel in the wake of the proposed rule's more stringent experience and qualification requirements. These commenters point out that existing personnel, such as the directors of operations and maintenance, chief pilot, and chief inspector, may already possess excellent management skills, and that to hire new personnel would be unnecessary and burdensome. Action Airlines suggests that instead of having to replace existing personnel when air carriers upgrade their equipment, they should have the option to get deviation or waiver authority and continue to use existing directors of operations, chief pilots, and directors of maintenance.

Metro International Airways states that the addition of management personnel would have a significant impact on operators that only operate two or three affected aircraft. The positions of chief inspector can be handled effectively by the director of maintenance. With such a small fleet of aircraft, the chief inspector would spend many hours idle. Also, a small commuter is more likely to contract out most, if not all, maintenance functions. In this situation, the director of maintenance could easily oversee that all work is completed to FAA standards and signed off by an appropriate person with an IA rating.

The commenter also opposes the proposed increase in management experience, indicating it will have a significant impact on small and proposed commuter airlines. Not only will higher wages be needed to attract those applicants that have the necessary experience, but the operators will need to lure those who qualify from secure positions within the industry. The commenter requests that the FAA define "large," stating there is a difference between a B747 and a Beech 1900C. The commenter recommends that the FAA retain the part 135 provision that allows the combinations of one or more of the required management personnel. As the airline grows it is understandable that the management functions would separate and the manager's experience level would rise. The addition of a chief inspector and a director of safety would create a top heavy airline that could not operate at a reasonable cost. Combining these positions must be allowed so new entrants with small fleets will have the chance to build an organization proudly serving the public and the public's interest.

American supports modifying the minimum requirements for director of operations, chief pilot, director of maintenance, and chief inspector under § 135.37 operations to reflect part 121 standards.

One commenter objects to the proposed requirement that a director of maintenance have 5 years experience in the past 5 years because it could disqualify those in management positions who may have been the victims of downsizing and companies going out of business.

One commenter disagrees with the 6-year currency requirement for the 3 years as PIC (under proposed § 119.67(a)) for a person becoming a director of operations for the first time. This commenter believes that PIC time is much more relevant to a director of operations' administrative responsibilities and that the currency requirement should apply to the chief pilot, whose function is much more technical. This commenter also disagrees with proposed § 119.71(c)(1) and (d)(1) which exempts the chief pilot from being qualified to serve as PIC in operations conducted under part 121. He believes that since the chief pilot is directly responsible for the proficiency of the pilots, he should be able to serve in this capacity.

For those directors who do not, § 119.67(e) allows operators to request authorization from their district office for the continued employment of those directors. However, note that §§ 119.67(e) and 119.71(f) provide for exceptions from experience requirements, but not from requirements to hold necessary certificates. The FAA anticipates that most operators whose directors do not meet the new requirements will request authorization and that those requests will be granted. The FAA agrees that in some cases the proposed recency requirements would place an unnecessary burden on those directors who may have extended periods of unemployment prior to being hired. Thus, for the final rule, the FAA is changing some of the recency requirements. The final rule also standardizes the language as much as possible between operations and airworthiness management positions. The final rule gives relief for those operators who do not operate large aircraft.

The FAA will develop handbook guidance on management personnel to provide FAA inspectors with criteria to respond to requests concerning issues raised by commenters, such as the combining of certain positions in the case of small operators. In analyzing such requests, the FAA will consider the number of airplanes being operated, the number of employees, the complexity of the operation, the ability of the operator to perform required tasks, and the equivalent level of safety.

The final rule contains the following requirements:

Director of Safety:

The major carriers have told FAA that they already have established this position and are already fulfilling this function. For other operations, § 119.65(b) provides flexibility for establishing this position.

Director of Operations:

Section 119.67 requires 3 years of experience as PIC of a large airplane operated under part 121 or part 135 of this chapter when the certificate holder operates large airplanes. If the certificate holder uses only small airplanes in its operation, the experience may be obtained in either large or small airplanes. For first time applicants, both §§ 119.67 and 119.71 require that the 3 years PIC experience must have been obtained within the past 6 years.

Chief Pilot:

Section 119.67 requires 3 years of experience as PIC of a large airplane operated under part 121 or part 135 of this chapter when the certificate holder operates large airplanes. If the certificate holder uses only small airplanes in its operation, the experience may be obtained in either large or small airplanes. For first time applicants, both §§ 119.67 and 119.71 require that the 3 years PIC experience must have been obtained within the past 6 years.

Director of Maintenance:

Section 119.67 requires 3 years of experience within the last 6 years in maintaining or repairing aircraft. Section 119.71 requires 3 years of experience within any amount of time in maintaining or repairing aircraft. The requirement in § 119.67(c)(4)(i) that the director of maintenance have experience in maintaining "large aircraft" has been changed to "aircraft with 10 or more passenger seats" to provide for maintenance experience acquired by work for an affected commuter.

Chief Inspector:

The requirement in § 119.67(d)(2) and (d)(3) that the chief inspector have experience in maintaining "large aircraft" has been changed to "aircraft with 10 or more passenger seats" to provide for maintenance experience acquired by work for an affected commuter.

Derivation and distribution tables. The purpose of the revisions to part 121, Subparts A, B, C, and D, and part 135, Subpart A, is to delete all sections which have been moved to part 119, such as requirements using outdated terminology. Subparts B, C, and D, and certain sections of Subpart A of part 121 are entirely deleted as well as certain sections of subpart A of part 135 because these

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| Subpart A: | |
| 119.1(a) | New language. |
| 119.1(b) | SFAR 38–2, Section 1(a). |
| 119.1(c) | New language. |
| 119.1(d) | New language. |
| 119.1(e) | New language. |
| 119.2 | New language. |
| 119.3 | SFAR 38–2, Section 6 and new language. |
| 119.5(a) | SFAR 38–2, Section 2(a). |
| 119.5(b) | SFAR 38–2, Section 2(b). |
| 119.5(c) | New language. |
| 119.5(d) | SFAR 38–2, Section 1(a)(3). |
| 119.5(e) | SFAR 38–2, Section 1(a)(3). |
| 119.5(f) | SFAR 38–2, Section 1(b). |
| 119.5(g) | SFAR 38–2, Section 1(c), 121.4, 135.7. |
| 119.5(h) | SFAR 38–2, Flush paragraph following Section 1(a)(3) and new language. |
| 119.5(i) | 121.27(a)(1), 121.51(a)(1), 135.13(a)(3). |
| 119.5(j) | 135.33. |
| 119.7(a) | SFAR 38–2, Section 3. |
| 119.7(b) | 121.23, 121.43. |
| 119.9(a) | 135.29. |
| 119.9(b) | New language. |
| Subpart B: | |
| 119.21(a) | SFAR 38–2, Section 4(a), 121.3. |
| 119.21(b) | SFAR 38–2, Section 4(b). |
| 119.21(c) | New language. |
| 119.23(a) | SFAR 38–2, Section 5(a). |
| 119.23(b) | SFAR 38–2, Section 5(b). |
| 119.25(a) | SFAR 38–2, Section 4(c), 5(c), and (d) and new language. |
| 119.25(b) | SFAR 38–2, Section 4(c), 5(c), and (d) and new language. |
| Subpart C: | |
| 119.31 | SFAR 38–2, Section 1(c), 2(a) and (b), 121.3, and 135.5. |
| 119.33(a) | SFAR 38–2, Section 1(c), 2(a) and (b), 3, 121.3, 135.5, 135.13(a). |
| 119.33(b) | SFAR 38–2, Section 1(c), 2(a) and (b), 3, 121.3, 135.5, 135.13(a). |
| 119.33(c) | SFAR 38–2, Section 1(c), 2(a) and (b), 3, 121.3, 135.5, 135.13(a). |
| 119.35(a) | 121.26, 121.47(a), 135.11(a). |
| 119.35(b) | 121.26, 121.47(a), 135.11(a). |
| 119.35(c) | 121.47(a). |
| 119.35(d) | 121.47(b). |
| 119.35(e) | 121.47(c). |
| 119.35(f) | 121.47(d). |
| 119.35(g) | 121.48. |
| 119.35(h) | 121.49. |
| 119.37(a) | 121.25(a), 121.45(a), 135.11(b)(1) and new language. |
| 119.37(b) | 121.25(a), 121.45(a), 135.11(b)(1) and new language. |
| 119.37(c) | 121.25(a), 121.45(a), 135.11(b)(1) and new language. |
| 119.37(d) | 121.25(a), 121.45(a), 135.11(b)(1) and new language. |
| 119.37(e) | 121.25(a), 121.45(a), 135.11(b)(1) and new language. |
| 119.39(a) | 121.27(a)(2), 121.51(a)(3), 135.11(b)(1). |
| 119.39(b) | 121.27(a)(2), 121.51, 135.13(a)(2) and (b). |
| 119.41(a) | 121.77(a), 135.15(a). |
| 119.41(b) | New language. |
| 119.41(c) | 121.77(b), 135.15(b). |
| 119.41(d) | 121.77(c), 135.15(d). |
| 119.43(a) | 121.75(b), 135.63(a)(2). |
| 119.43(b) | 121.75(b), 135.63(a)(2). |
| 119.47(a) | 135.27(a). |
| 119.47(b) | 121.83, 135.27(b). |

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| 119.51(d) | 121.79(d), 135.17(c) and (d). |
| 119.51(e) | 121.79(b), 135.17(c) and (d). |
| 119.53(a) | 121.6(a). |
| 119.53(b) | New language. |
| 119.53(c) | 121.6(b). |
| 119.53(d) | 121.5(c). |
| 119.53(e) | New language. |
| 119.53(f) | New language. |
| 119.55(a) | 121.57(a) and (b). |
| 119.55(b) | 121.57(a) and (b). |
| 119.55(c) | 121.57(a) and (b). |
| 119.55(d) | 121.57(a) and (b). |
| 119.55(e) | 121.57(a) and (b). |
| 119.57(a) | 121.57(c). |
| 119.57(b) | New language. |
| 119.58(a) | 135.19(b). |
| 119.58(b) | 135.19(a). |
| 119.58(c) | 135.19(c). |
| 119.59(a) | 121.81(a), 135.73, and new language. |
| 119.59(b) | 121.73, 121.81(a), 135.63(a), 135.73, and new language. |
| 119.59(c) | 121.81(a). |
| 119.59(d) | New language. |
| 119.59(e) | New language. |
| 119.59(f) | New language. |
| 119.61(a) | 121.29(a), 121.53(a), (c), and (d), 135.9(a). |
| 119.61(b) | 121.29(a), 121.53(c), and new language. |
| 119.61(c) | 135.35. |
| 119.63(a) | New language. |
| 119.63(b) | New language. |
| 119.65(a) | 121.59(a). |
| 119.65(b) | 121.59(b). |
| 119.65(c) | 121.59(b). |
| 119.65(d) | 121.61 and new language. |
| 119.65(e) | 121.59(c). |
| 119.67(a) | 121.61(a) and new language. |
| 119.67(b) | 121.61(b) and new language. |
| 119.67(c) | 121.61(c), 135.39(c) and new language. |
| 119.67(d) | 121.61(d) and new language. |
| 119.67(e) | 121.61(b), 135.39(d). |
| 119.69(a) | 135.37(a). |
| 119.69(b) | 121.59(b), 135.37(b). |
| 119.69(c) | 121.59(b). |
| 119.69(d) | 135.39 and new language. |
| 119.69(e) | 121.59, 135.37(c). |
| 119.71(a) | 135.39(a)(1) and new language. |
| 119.71(b) | 135.39(a)(2) and new language. |
| 119.71(c) | 135.39(b)(1) and new language. |
| 119.71(d) | 135.39(b)(2) and new language. |
| 119.71(e) | 135.39(c) and new language. |
| 119.71(f) | 135.39(d) and new language. |

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| 121.9 | deleted. |
| 121.13 | 119.25. |
| 121.21 | 119.1. |
| 121.23 | 119.7(b). |
| 121.25(a) | 119.37(a), (b), (c), (d), (e), (f), and (g). |
| 121.25(b) | 119.49(a). |
| 121.26 | 119.35 (a) and (b). |
| 121.27(a)(1) | 119.5(i). |
| 121.27(a)(2) | 119.39 (a) and (b). |
| 121.29(a) | 119.61 (a) and (b). |
| 121.41 | 119.1. |
| 121.43 | 119.7(b). |
| 121.45(a) | 119.37(a), (b), (c), (d), (e), (f), and (g). |
| 121.45(b) | 119.49 (a) and (b). |
| 121.47(a) | 119.35(a), (b), and (c). |
| 121.47(b) | 119.35(d). |
| 121.47(c) | 119.35(e). |
| 121.47(d) | 119.35(f). |
| 121.48 | 119.35(g). |
| 121.49 | 119.35(h). |
| 121.51 | 119.39(b). |
| 121.51(a)(1) | 119.5(i). |
| 121.51(a)(3) | 119.39(a). |
| 121.53(a) | 119.61(a). |
| 121.53(c) | 119.61 (a) and (b). |
| 121.53(d) | 119.61(a). |
| 121.55 | deleted. |
| 121.57(a) | 119.55(a), (b), (c), (d), and (e). |
| 121.57(b) | 119.55(a), (b), (c), (d), and (e). |
| 121.57(c) | 119.57(a). |
| 121.59 | 119.69(e). |
| 121.59(a) | 119.65(a). |
| 121.59(b) | 119.65 (b) and (c); 119.69 (b) and (c). |
| 121.59(c) | 119.65(e). |
| 121.61 | 119.65(d). |
| 121.61(a) | 119.67(a). |
| 121.61(b) | 119.67 (b) and (e). |
| 121.61(c) | 119.67(c). |
| 121.61(d) | 119.67(d). |
| 121.71 | 119.1. |
| 121.73 | 119.59(b). |
| 121.75 | 119.49(d). |
| 121.75(b) | 119.43 (a) and (b). |
| 121.77(a) | 119.41(a). |
| 121.77(b) | 119.41(c). |
| 121.77(c) | 119.41(d). |
| 121.79(a) | 119.51(a). |
| 121.79(b) | 119.51 (b) and (e). |
| 121.79(c) | 119.51(c). |
| 121.79(d) | 119.51(d). |
| 121.81(a) | 119.59(a), (b), and (c). |
| 121.83 | 119.47(b). |
| Part 135: | |
| 135.5 | 119.31; 119.33(a), (b), and (c). |
| 135.7 | 119.5(g). |
| 135.9(a) | 119.61(a). |
| 135.11(a) | 119.35 (a) and (b). |
| 135.11(b) | 119.49(a). |

| | |
|-----------------------|---|
| 135.15(b) | 119.41(b). |
| 135.15(d) | 119.41(d). |
| 135.17(a) | 119.51(a). |
| 135.17(b) | 119.51(c). |
| 135.17(c) | 119.51 (d) and (e). |
| 135.17(d) | 119.51(b), (d), and (e). |
| 135.19 | 119.58. |
| 135.27(a) | 119.47(a). |
| 135.27(b) | 119.47(b). |
| 135.29 | 119.9(a). |
| 135.31 | 119.5. |
| 135.33 | 119.5(j). |
| 135.35 | 119.61(c). |
| 135.37(a) | 119.69(a). |
| 135.37(b) | 119.69(b). |
| 135.37(c) | 119.69(e). |
| 135.39 | 119.69(d). |
| 135.39(a)(1) | 119.71(a). |
| 135.39(a)(2) | 119.71(b). |
| 135.39(b)(1) | 119.71(c). |
| 135.39(b)(2) | 119.71(d). |
| 135.39(c) | 119.67(c); 199.71(e). |
| 135.39(d) | 119.67(e); 119.71(f). |
| 135.63(a) | 119.59(b). |
| 135.63(a)(2) | 119.43 (a) and (b). |
| 135.73 | 119.59 (a) and (b). |
| 135.81 | 119.49(d). |
| SFAR 38-2: | |
| Section 1(a) | 119.1(b). |
| Section 1(a)(3) | 119.5 (d) and (e); 119.5(h). |
| Section 1(b) | 119.5(f). |
| Section 1(c) | 119.5(g); 119.31; 119.33 (a), (b), and (c). |
| Section 2(a) | 119.5(a); 119.31; 119.33 (a), (b), and (c). |
| Section 2(b) | 119.5(b); 119.31; 119.33 (a), (b), and (c). |
| Section 2(c) | 129.1. |
| Section 3 | 119.7(a); 119.33 (a), (b), and (c). |
| Section 4(a) | 119.21(a). |
| Section 4(b) | 119.21(b). |
| Section 4(c) | 119.25 (a) and (b). |
| Section 4(d) | 119.25 (a) and (b). |
| Section 5(a) | 119.23(a). |
| Section 5(b) | 119.23(b). |
| Section 5(c) | 119.25 (a) and (b). |
| Section 5(d) | 119.25 (a) and (b). |
| Section 6 | 119.3. |

VII. Discussion of Comments Related to Costs and Benefits

This section of the preamble discusses those costs and benefits related comments submitted to the docket for the NPRM. The comments are presented by topic within their respective areas of concern.

1. Operations

Flight Time Limitations. A commuter operator from Alaska voiced its concerns about the potential high cost (\$502,000) of compliance associated with the proposed requirement for flight time limitations. According to this operator, compliance with the proposed rule would require hiring an estimated 15 to 75 percent more pilots, depending on the location of its operations in Alaska. Also, there would also be additional costs incurred for training.

compliance costs for establishing a dispatch system. Second, it is the FAA's position that nearly all part 135 commuters already have the basic communication equipment needed for a dispatch system because they already have flight locators and flight followers conducting some degree of operational control. Third, even in remote areas carriers have access to contracted communications systems. Fourth, in regard to the personnel costs associated with the dispatch system, these operators are expected to upgrade most of their existing flight locators and flight followers to be dispatchers, at an hourly wage increase of \$1.60 (or \$4,193 annually). Some dispatchers will be hired outside of the company at an annual wage of \$24,000. This position is based on information obtained from the Aircraft Dispatchers Federation (ADF) and a survey of several part 135 operators with dual operations specifications (parts 121 and 135). The FAA estimates a cost of \$13,000 as the average minimum annual operating cost of establishing a dispatch system (assuming nothing is in place by a particular operator). This includes costs for telephone service, office space, office furniture, access to a current weather service, and access to air-ground communications.

Pilot Qualifications. Several commenters are opposed to the proposed requirements for pilot qualifications on the basis of an anticipated high cost of compliance.

FAA Response: The final rule does not contain requirements for crewmember training and pilot qualifications. These requirements are contained in a separate rulemaking action that pertains to operators under parts 121 and 135.

Cockpit Protective Breathing Equipment (PBE). One airplane manufacturer questions the need for fire-fighting PBE on the flight deck of commuter airplanes with 10 to 19 passenger seats. The commenter asserts that it would cost an additional \$23,800 dollars (rather than the FAA's cost estimate of \$400 per PBE unit) to equip each one of its 10-to-19-seat airplanes with such PBE on the flight deck. This cost estimate does not include a one-time \$52,000 for development costs. According to the commenter, its airplanes are already equipped with fixed smoke-and-flame protection PBE at each of the two pilot stations. Thus, the only potential cost would be for a fire-fighting PBE on the flight deck.

FAA Response: The FAA has decided to drop the proposed requirement for fire-fighting PBE on the flight deck of affected airplanes with 10 to 19 seats.

Costs of Compliance—All Items. According to one commenter, the FAA's analysis grossly underestimated costs. The cost of the proposed rule should be \$1.6 billion instead of the FAA's estimate of \$275 million.

FAA Response: The FAA disagrees with the commenter. The FAA contacted the commenter to acquire information on the methodology and basic assumptions or rationale used to derive the cost estimate. With regards to the methodology, the commenter indicated that he used his own judgment and information provided by other commenters. None of his analysis was supported empirically by outside sources or seemed to be more credible than that used by the FAA. As to the basic assumptions, the commenter said there was no documentation that detailed the methodology used to derive his cost estimate of \$1.6 billion. Therefore, since the commenter was unable to substantiate the cost estimate, the FAA will retain its cost estimate and all associated methodology.

2. Cabin Safety

First Aid and Medical Kits. Several commenters provided cost estimates ranging from \$1,500 to \$2,000 per airplane for the first aid and medical kit requirement, but these cost estimates were submitted without any detailed documentation. An additional commenter, who was contacted, agrees with the cost per first aid kit, but argues that the turnover rate should be 100% a year due to pilfering.

FAA Response: The cost estimates provided by the commenters are higher than the FAA's original estimates. The FAA based the equipment costs on off-the-shelf prices that would be available to all operators. The FAA contacted one commenter that estimates the cost of \$1,500 per airplane for a first aid kit. The commenter's cost estimate includes up front costs such as the engineering designs, administrative

FAA Response: The FAA is assuming that affected lockable cockpit doors would have to be retrofitted to work with keys. Based on information from FAA technical personnel, the FAA is assuming that all of the 20-to-30-seat airplanes would have their locks or doors retrofitted, at a total cost of \$182 per retrofit (\$100 equipment + \$82 labor).

Flotation Cushions and Life Vests. One commenter opposes the requirement because of the equipment cost and weight penalty. This commenter states that the seat cushions in the METRO airplane would not serve as effective flotation devices. In addition, this commenter provides a cost estimate for acquiring and retrofitting individual flotation devices for METRO airplanes.

FAA Response: The FAA concurs that if the seat cushions in a particular airplane model do not serve as flotation devices, then individual flotation devices would have to be acquired. Also, the FAA verified the commenter's cost estimate and has incorporated it into the regulatory evaluation for the final rule.

Halon Fire Extinguishers. One commenter from Alaska provides an aggregate cost estimate for the required halon fire extinguishers which was substantially higher than the estimate in the NPRM. The commenter does not provide additional commentary on the requirement beyond the costs.

FAA Response: The FAA partially disagrees with this commenter. A one-time cost estimate to account for up-front administrative and engineering costs to comply with Type Data Certificates was submitted by the commenter. The FAA verified this cost-estimate and has incorporated it into the cost of the final rule. However, the FAA contends that there would be no major retrofit costs because the halon fire extinguishers would replace existing fire extinguishers with the same size canister. The FAA's equipment costs were based on off-the-shelf prices for halon which would be available to all operators.

Carry-on Baggage. A commenter from Alaska believes that the FAA's cost estimate for the carry-on baggage screening program implementation is too low. This commenter reasons that the wage rates and paperwork burden would be higher for the Alaska air carriers. In addition, the commenter strongly objects to applying the scanning program at locations that do not have terminal facilities. This commenter believes that each operator will need to develop a measurement device to check each item of carry-on baggage which will result in delays. All of this will cost \$156,000 per year for each Alaskan commuter air carrier; there is no detailed explanation of what this entails. Another commenter, who was contacted, believes that for crewmembers to enforce the carry-on baggage program will delay each flight one minute; this flight delay will need to be costed out.

FAA Response: The FAA disagrees with these commenters. The FAA is unable to evaluate the Alaska commenter's cost estimate without a detailed explanation of the cost breakdown. However, it is important to note that the wage rate and the paperwork hours assumed in the NPRM were national averages, so these numbers could be higher in some parts of the country, like Alaska, and lower in others. In addition, no carrier would be required to have a measuring device to carry out this program; the baggage screening program is visual in nature, and the requirements and costs involved only refer to preparing baggage screening procedures for the carrier's operations manual and an addendum to the Operations Specifications. Finally, the FAA does not believe that there would be delays on any flights due to such a program as crewmembers would be "eye balling" carry-on baggage as passengers are boarding at the same speed they have always boarded.

Flight Attendants at the Gate. A commenter believes that all operators would only use trained, authorized, substitute personnel when coverage is needed. This commenter believes that these trained persons would all be new hires and paid annual salaries of \$12,000. One commenter from Alaska opposes the requirement for flight attendants at the gate. The commenter states that both crewmembers on the 10-to-19 seat airplanes would need to assist in the loading and unloading process, and hence neither could stay on board with passengers. Furthermore, the commenter states that deplaning passengers would not be a viable option because airports in Alaska do not have the proper facilities. Therefore, the commenter states that a trained substitute would have to stay on board the airplane with the passengers 100% of the time. The commenter states that the FAA has also underestimated the training costs and wage

that Alaskan air carriers would either deplane passengers or use a crewmember.

Passenger Information. One commenter from Alaska disagrees with the FAA's cost estimate for passenger information cards and believes that it is too low. Alaskan air carriers would need to devise a more comprehensive information system due to the many nationalities and native languages in Alaska and this would entail great expense. Some air carriers would also have to translate into Japanese, Korean, and Russian for tourists from the Pacific Rim nations. The commenter also thought that the FAA's assumption of a three year life expectancy for information cards was too high. Based on experience, the commenter states that information cards last less than a year due to wear and theft. The commenter also estimates costs of \$26,000 for Alaskan commuter air carriers in the first year and \$4,224 each year thereafter.

FAA Response: The FAA disagrees with this commenter and believes that the commenter misunderstood the requirements of this proposed section. There is no current or proposed requirement to translate any passenger information cards into any other language. In addition, the industry average for passenger information cards is three years, so the FAA will use the NPRM costs.

3. Certification

Performance Criteria. Of seven comments received, only one manufacturer provided cost information. This manufacturer reports that, for their part 23 commuter category certificated airplanes, there would be no compliance costs. However, for their SFAR 41C certificated airplanes, developing the data needed to comply with the part 121 requirements for obstacle clearance and for accelerate-stop would be \$3,000 per airplane for obstacle clearance and \$2,500 per airplane for accelerate stop. For their pre-SFAR 41C airplanes, it would be \$63,000 per airplane to develop performance data for obstacle clearance and \$145,000 per airplane to develop anti-skid data, to purchase and install anti-skid systems, and to incur the 35 lb. weight penalty for accelerate-stop.

FAA Response: In the Notice, the FAA stated that all part 135 scheduled airplanes would be able to meet these performance criteria and that the only cost would be a \$5,000 per type certificate to provide the data and obtain FAA approval for inclusion into the airplane flight manual. After additional review, however, the FAA realizes that SFAR 41 and predecessor category airplanes will be unable to meet all of the part 121 performance criteria without having to offload so many passengers or cargo as to become unprofitable to operate in scheduled passenger service. If operators substitute airplanes configured with 9 or fewer passenger seats for these airplanes, there could be a substantial economic loss and potential safety reduction. Thus, the FAA will allow the operators of these airplanes to have 15 years to meet the part 121 performance requirements. This will allow operators sufficient time to plan for the replacement of these airplanes without incurring an enormous economic loss. It also will allow manufacturers time to develop better substitutes for these airplanes.

Engine-Out-En-Route-Net-Flight Data. There were three commenters on this issue. One manufacturer commenter reports a one-time cost of \$24,774 to create the required one-engine-inoperative-en-route-net-flight-path data which do not exist for any 10-to-19-seat airplanes. Another commenter reports that these flight data are not included in the FAA approved airplane flight manual.

FAA Response: The FAA concurs with these commenters and has adopted the commenter's cost estimate.

Cargo Compartment Smoke Detector and Fire Extinguishing Systems and Cargo Compartment Liners. Two commenters report a per-airplane cost of \$15,230 to \$15,580 to install smoke detectors and fire extinguishers in the cargo compartments of newly-manufactured 10-to-19-seat airplanes. The commenter also reports a per-airplane-retrofitting cost of \$17,420; a one-time cost of \$85,400 for engineering, designing, testing, and paperwork for FAA approval; and 32 lbs. of added weight to each airplane. The commenter also reports a per-airplane cost for cargo and baggage compartment liners of \$13,000 for a retrofit; \$10,420 for a newly-manufactured airplane; a \$463,950 cost for a one-time engineering, designing, testing,

Landing Gear Manual
19-seat airplanes have aural landing gear warnings. Two of these commenters report no compliance cost. The other commenter reports a one-time manufacturer's cost of \$2,620 to obtain FAA approval of the flight-manual changes.

FAA Response: The FAA disagrees with the commenter who reported a one-time cost because the presence of the aural warning device in existing airplanes means that this equipment was already included and approved in the airplane flight manual. As the FAA believes that all affected airplanes already employ an aural warning system, there are no compliance costs.

Ditching Approval. There were five commenters who addressed this issue. One commenter reports a \$7,430 cost for its DeHavilland Twin Otters to comply with this provision. Another commenter reports that it would be impossible for the Twin Otter to comply with the ditching requirement due to its fixed landing gear; also the commenter says that other airplane operators would incur a \$180 per airplane paperwork cost to demonstrate compliance. Another commenter reports that the costs would be extremely high. Two commenters report that there would be a \$1,500 one-time paperwork cost to demonstrate compliance to the FAA for revision of the approved flight manual.

FAA Response: The FAA agrees with the commenters. For the final rule, the compliance period will be extended to 15 years. Thus, the potential cost of compliance will be minimal.

Take-Off Warning System. One manufacturer reports that the per airplane cost to install take-off warning devices would be \$24,920 on a newly-manufactured airplane; \$26,500 for a retrofit; and \$150,260 for a one-time engineering, development, testing, and FAA-approval cost. Also, these devices would weigh 5 lbs. Another commenter reports that it would cost \$12,600 per airplane to install a 2 lb. take-off warning device on a newly manufactured airplane. One commenter reports that it would cost \$11,350 per airplane to install a take-off warning device on a newly manufactured airplane.

FAA Response: The FAA estimates that the per airplane cost for a newly manufactured airplane would be \$16,000 for engineering, developing, testing, and installing, plus an annual \$1,600 inspection, maintenance, and repair cost. The FAA also did not estimate any additional weight for this device. However, after further technical review, the FAA concludes that none of these airplane models (except the Beech 99) would need a takeoff warning system because a takeoff with a device in the most adverse position does not create a hazardous condition. For the Beech 99, that problem was resolved when the FAA issued an Airworthiness Directive (AD) requiring these airplanes to install a takeoff warning system. Thus, there are no compliance costs associated with this requirement.

Third-Attitude Indicator. Two commenters report that there would be no compliance cost for newly-manufactured airplanes because third attitude indicators are standard equipment. One of these commenters reports that there would be a \$1,500 one-time manufacturer's paperwork cost to obtain FAA approval to changes in the flight manual. The same commenter reports that it would cost \$10,865 to retrofit an airplane. The other commenter reports that the per-airplane-retrofit cost would be between \$40,600 for a Beech 1900C and \$48,800 for a Beech 99, and that a third-attitude indicator would weigh 15 lbs. An airplane operator reports that it would cost \$40,000 per airplane to retrofit its Beech 1900Cs. Another airplane operator reports that it would cost \$17,000 per airplane to retrofit its DeHavilland Twin Otters. Finally, a commenter reports that it would cost \$53,170 per airplane to retrofit airplanes. In addition to the reported costs, the commenter states that there was insufficient time for operators to retrofit these airplanes within the one-year period proposed by the NPRM.

FAA Response: The FAA estimates that the per airplane cost would be \$16,000 for a retrofit and \$8,000 for a newly-manufactured airplane. The annual maintenance, inspection, and repair costs would be 10 percent of the retrofitting costs. The third-attitude indicator and wiring would weigh 5 lbs. Based on the manufacturer information, this device has been installed on all turbo-jet and commuter category airplanes.

The FAA contends that its cost estimates in the NPRM are valid. However, the FAA accepts the comment that the additional weight would be 15 lbs. After additional analysis, and in light of the potential

by 10 lbs. Airlander commenter reports that a retrofit would cost \$725.

Concerning 20-to-30-seat airplanes, two manufacturer commenters report that it would cost \$4,000 to retrofit their airplane lavatories. One of these commenters also states that only one half of the newly manufactured airplanes with lavatories have these devices. Two airlines and one association report that it would cost \$2,500 to retrofit their airplane lavatories. One of the airlines reports that these devices would weigh 20 lbs.

FAA Response: Section 121.308(a) requires each lavatory to have a smoke detector system connected to either: (1) A warning light in the flight deck; or (2) a warning light or an aural warning in the passenger cabin that can be readily detected by a flight attendant. Section 121.308(b) requires each lavatory to have a built-in automatic fire extinguisher in each waste-disposal receptacle in the lavatory. These requirements are also found in section 25.854 but only for airplanes type certificated after 1991. There are no similar provisions in part 135 or part 23.

In reviewing these comments for the 20-to-30-seat airplanes, the FAA believes, although these commenters did not document the sources for their estimates, that these estimates appear to be based on the cost of a flight deck warning light system, which would involve some airplane rewiring. However, the FAA's estimate is based on the operator electing the second option allowed in the proposed rule—an aural warning device that could be heard by the flight attendant. That option is clearly the cost-effective option for 20-to-30-seat airplanes that are required to have a flight attendant.

These provisions are largely unimportant for the 10-to-19-seat airplanes because very few have a lavatory. In fact, one manufacturer reported that none of their airplanes operating in the U.S. has one. The FAA believes that the reported costs for these individual airplanes are so large because any costs to engineer, design, and test would be distributed over so few airplanes. However, for those few 10-to-19-seat airplanes that do have a lavatory, the FAA changed this rule to allow an aural warning system that can be heard by the flight crew. On that basis, the FAA determined that it would cost about \$175 to retrofit or to install in a newly manufactured airplane a 5 lb. aural smoke detector that requires \$50 a year in maintenance and inspection and \$15 a year for replacement batteries. The FAA also determined that it would cost \$300 to retrofit a 5 lb. receptacle automatic fire extinguisher that requires \$75 a year in maintenance and inspection and \$50 a year for recharging. These costs are \$50 a year more than the costs estimated in the NPRM.

The FAA also estimates that half of the 272 existing 20-to-30 seat airplanes certificated before 1991 did not have these devices whereas 90 percent of the newly-manufactured airplanes have them. The FAA accepts the commenter's statement that only half of these newly-manufactured airplanes have these devices.

Emergency Exit Marking. One manufacturer reports that installing an emergency exit marking light would cost \$11,050 for a retrofit, \$9,100 for a newly manufactured airplane, and would involve a one-time manufacturing cost of \$87,280 to engineer, design, test, and obtain FAA approval for this device.

FAA Response: The cost of this provision was a part of the FAA's estimated emergency lighting cost. After additional analysis, the FAA believes that given the passenger's close proximity to emergency exits and the high cost of complying with the lighting requirements, affected airplanes will not be required to comply with certain lighting provisions in 121.310.

Floor Proximity Lighting. One manufacturer commenter reports that installing emergency floor proximity lighting would cost between \$27,600 and \$36,000 for a retrofit, \$20,800 for a newly manufactured airplane, and the installed lighting would weigh 12 lbs. A second manufacturer commenter reports that it would cost \$19,000 for a retrofit; \$15,000 for a newly manufactured airplane; there would be a one-time engineering, developing, testing, and obtaining FAA approval cost of \$52,650, and the installed lighting would weigh 10 lbs. This commenter also proposes an alternative interior lighting of the exit and exterior emergency exit lighting as a substitute for the full-scale floor proximity and exterior emergency exit lighting in the NPRM. This alternative lighting system is required for their airplanes in Great Britain.

airplanes. After additional analysis, the FAA agrees with these commenters that the earlier FAA costs severely underestimated the retrofitting and new installation costs. As a result, the FAA determines that 10-to-19-seat airplanes would not be required to meet these lighting requirements in 121.310.

Emergency Exit Exterior Lighting. One manufacturer commenter reports that the per airplane cost would be \$13,400 to install a 15 lb. emergency exit exterior lighting system on a newly manufactured airplane and \$17,950 for a retrofit. In addition, they report a one-time engineering, design, testing, and paperwork for FAA approval cost of \$64,525. However, as noted in the previous section, their suggested alternative to floor proximity lighting would also contain an exterior emergency lighting capability. Another manufacturer commenter reports that the per airplane cost would be \$11,800 to install a 12 lb. emergency exit exterior lighting system on a newly manufactured airplane and \$17,250 to \$23,550 for a retrofit. One air carrier reports that it would cost \$9,400 per airplane to retrofit its DeHavilland Twin Otters. Another air carrier reports that it would cost \$16,640 to retrofit its Beech 1990Cs, 1900Ds, and its Jetstream 31s.

FAA Response: The FAA provided one aggregated cost estimate for the emergency lighting system. However, as that total cost estimate for all lighting required by § 121.310 was \$2,500, the FAA reevaluated its exterior-lighting-cost estimate. After additional analysis, the FAA agrees with these commenters that the earlier FAA costs severely underestimated the retrofitting and new installation costs. As a result, the FAA determines that 10-to-19-seat airplanes would not be required to meet these lighting requirements in 121.310.

Exterior Emergency Exit Marking. One manufacturer commenter reports that it would cost between \$350 and \$650 for an airplane operator to install these markings on the exterior of the emergency exits. One association commenter reports that it would cost \$74 to install these markings. Neither commenter discusses the number of airplanes that would need to have these markings installed.

FAA Response: The FAA estimated that about 10 percent of the 10-to-19-seat airplanes would need to comply with this requirement at a cost of \$100 per airplane. However, the FAA notes that this section is identical to § 135.178(g). As a result, there are no compliance costs.

Pilot Shoulder Harnesses. One manufacturer commenter reports that even though all of their airplanes are now manufactured with the single point pilot shoulder harness, they would still incur a \$22,500 one-time cost—presumably to obtain FAA approval for inclusion in the flight manual. One association commenter reports that it would cost \$440 to retrofit a single point shoulder harness.

FAA Response: The FAA did not estimate any cost for this provision because the proposal did not require retrofitting and the FAA was informed by industry that the single point inertial harness for pilots is standard equipment on all currently-manufactured airplanes. Thus, the FAA determines that there is no compliance cost.

The FAA disagrees with the commenter who reported a one-time manufacturer's cost because this equipment is already in airplanes and, hence, approved in the airplane flight manual.

Interior Panel Heat and Smoke Release Standards. There were two commenters on this issue. One manufacturer commenter reports that the per airplane cost for requiring the more stringent fireproofing material for cabin interiors would be \$77,550 for a retrofit, \$67,500 for a new installation, and there would be a one-time engineering, designing, testing, retooling, and obtaining FAA approval cost of \$627,910. Another manufacturer commenter reports that it would cost \$90,000 per airplane to install in a newly manufactured airplane and also notes that the Notice did not propose a retrofit. It should be noted that the commenter's methodology averages any one-time engineering and development costs into the expected number of future sales of the Beech 1900D.

FAA Response: The FAA disagrees with the commenters. Manufacturers would only have to comply with the existing type-certification standard. Therefore, there would be no compliance cost.

costs would range from \$20,000, \$42,950, and \$50,000.

FAA Response: The FAA estimated that the per-airplane-incremental cost would be \$20,000 to retrofit fire-blocked-seat cushions, \$5,000 to install these seat cushions on newly-manufactured airplanes, and \$10,000 to replace these seat cushions on airplanes that have fire-blocked-seat cushions. An additional cost would be the 38 lbs. of weight these seats add to the airplane. The FAA acknowledges the fact that different airplanes would have different retrofitting and new installation costs.

After additional analysis, the FAA accepts the manufacturer commenters' cost estimates for their airplanes as well as accepts the air carrier estimates provided for the DeHavilland Twin Otter and the Jetstream 31. For the other types of airplanes that would need to be retrofitted, the FAA uses an average of these reported retrofitting costs weighted by the number of each type of this airplane still in service. The FAA also accepts the commenters weight estimates for each of their own airplanes. After additional analysis, the FAA finds that, for the final rule, a 15-year compliance period is appropriate for 10-to-19-seat airplanes.

"Fasten Seat Belt" Lighted Sign. There were two commenters on this issue. One manufacturer reports that installing a fasten seat belt light would cost between \$3,025 and \$4,000 for a retrofit and \$1,600 for a newly manufactured airplane. One association reports that it would cost \$11,000 per airplane.

FAA Response: The FAA had not estimated any compliance costs for section 121.317(b) because it was believed that commuter airplanes had these signs. However, after additional analysis, the FAA determines that a placard and a pre-flight briefing provide an equivalent level of safety to a lighted sign. As these are industry practices, there is no compliance cost.

Wing Ice Light. There were two comments on this issue. One manufacturer reports that there would be no compliance costs for any of their airplanes. One association reports that it would cost \$11,000 to install wing ice lights on its members' airplanes.

FAA Response: In the Notice, the FAA did not estimate any costs for this provision because the provision states "No person may operate an airplane in icing conditions at night unless means are provided for illuminating or otherwise determining the formation of ice on the parts of the wings that are critical from the standpoint of ice accumulation." The FAA holds that all of the airplanes have either the wing ice lights or an acceptable alternative method for determining the icing accumulation on the wings. As a result, there is no compliance cost.

Pitot Heat Indication. There were five commenters on this issue. One manufacturer reports that the per-airplane cost would be \$9,250 to retrofit pitot heat indication tubes, \$10,600 to install on a newly-manufactured airplane, there would be a one-time cost to apply, engineer, design, and test of \$31,670; and it would weigh 4 lbs. Another manufacturer commenter reports that it would cost between \$3,000 and \$5,700 per airplane to retrofit its models no longer in production and it would weigh 1 lb. This commenter also reports that all of its currently manufactured airplanes have pitot heat indication systems. One air carrier reports it would cost \$1,650 to retrofit its DeHavilland Twin Otters with pitot heat indication tubes. One association reports that it would cost its members \$11,000 per airplane for a retrofit while another association reports that it would cost its members between \$1,500 and \$25,000 per airplane for a retrofit.

FAA Response: Based on information contained in the Draft Regulatory Evaluation to the FAR/JAR Harmonization, the FAA had estimated that the per airplane costs would be \$500 for a retrofit and \$250 for a newly-manufactured airplane. After review of these comments, the FAA has revised these cost estimates to \$4,000 for a retrofit, \$2,000 for installation on a newly manufactured airplane, and an additional 5 lbs. of weight to the airplane.

Power Distribution System. One commenter reports that § 121.313(c) requires a power supply and distribution system that meets the requirements of six sections of part 25. They state that this would require a major redesign of their airplanes' electrical power distribution system. They report a per airplane

required to comply with the proposal. Although no exact costs were provided, these commenters assert that this time out of service would result in a substantial revenue loss.

FAA Response: Even though the FAA attempted to design the proposed rule to minimize out-of-service time, the agency agrees with these commenters that there would be some out-of-service time for some of the affected airplanes. However, as a result of the changes from the NPRM to the final rule, the FAA contends that all of the required equipment by the final rule can be installed during regularly scheduled maintenance and there will be no additional out-of-service time.

4. Maintenance

The Alaska Air Carriers Association (AACA), citing the uniqueness of the Alaskan operating environment and the absolute necessity of air travel in Alaska, notes that most Alaskan operators utilize mixed fleets and employ maintenance personnel who work on all airplanes in such mixed fleets. The AACA maintains that requiring the scheduling of maintenance personnel according to part 121 standards would place an additional administrative burden and financial compliance cost on air carriers at locations with limited personnel and mixed fleets. The AACA contends that the part 121 specification of maintenance personnel duty time limitations would require the air carrier either to develop and apply separate work schedules for part 121 and part 135 mechanics or to hire additional mechanics.

FAA Response: With few exceptions, the FAA agrees with the commenters. Part 121 requires 24 hours off during any 7 consecutive days; part 135 makes no such provision. In its original assessment of maintenance and preventive maintenance personnel duty time limitations, the FAA assumed the issue to be non-controversial; the existence of union work rules, Department of Labor regulations and the generally accepted notion of a "day of rest" were believed to be sufficient to accomplish the same result. As a consequence, the FAA did not assess any costs associated with the burden of scheduling and providing a day of rest for part 135 mechanics as is required under part 121 where operators must ensure adequate rest for their mechanics.

The FAA maintains that mechanics, similar to pilots and flight attendants, must receive adequate rest in order to perform their duties properly and that the minimum standard required under part 121 would ensure that the opportunity for rest is provided. The FAA, however, concurs with the AACA that the extending of duty time limitations to the Alaskan operators of mixed fleets utilizing maintenance personnel under both parts 121 and 135 would be an additional cost burden. Therefore, based on cost information provided by the AACA, the FAA has adjusted its original maintenance cost estimates accordingly. The adjustment is two-fold: 1) the full cost burden inclusive of potential added labor costs were estimated for Alaskan 10-19 seat category air carriers; and 2) the administrative maintenance personnel scheduling costs without the labor cost factor were estimated for the remainder of the 10-to-19-seat non-Alaskan commuter fleet as well as the 20-to-30-seat commuter fleet.

Maintenance Recordkeeping Requirements (Recording). The AACA also criticizes the FAA's estimate of a one-time cost for compliance with the commuter rule's maintenance provisions. The AACA maintains that the one-time cost is underestimated and that there would be on-going maintenance recordkeeping costs.

FAA Response: The FAA concurs and has adjusted its original maintenance cost estimates accordingly. In this instance, however, the FAA has apportioned the added required maintenance recordkeeping costs between 10-to-19-seat and 20-to-30-seat airplanes for the total domestic commuter industry.

Maintenance Recordkeeping Requirements (Records Transfer). One commenter objects to the proposed change requiring engine and propeller total time in service to be added to the list of required recorded items. Typically, under part 121, only the total hours in service of an airplane's airframe is transferred information on older airplanes because operators have not been required to retain engine and propeller time in service data. According to the commenter, this change would necessitate operators of older 121 airplanes to undergo an extensive search of maintenance records to determine the historical times on the engine and propeller if such data is available at all.

Continuous Airworthiness Maintenance Program (CAMP). One commenter estimates that the cost associated with the CAMP was considerably greater (\$1.6 million) relative to the FAA's estimate to develop or revise and upgrade the CAMP (\$105,000) as a result of the commuter rule.

FAA Response: The FAA does not concur with the commenter's estimate. The FAA maintains that nearly all operators of airplanes with 10-to-19- or 20-to-30-seat configurations regardless of whether operating under part 121 or part 135, are either conducting their scheduled maintenance under an approved CAMP or have adopted a CAMP as the basic guideline for their scheduled maintenance. As a consequence, the FAA based its original estimates on the cost associated with the minimum editorial changes to operators' CAMP's necessitated by the commuter rule.

The FAA however, has adjusted its maintenance cost estimates for recordkeeping requirements based on the comments already discussed and detailed above. The FAA believes the costs described by the commenter are costs associated with the new recordkeeping requirements, not administrative costs associated with the modifications to existing CAMP's.

5. Part 119

Single-Engine Airplanes. Several commenters state that the NPRM cost estimates for not allowing a passenger to sit in the co-pilot seat on a single-engine Otter are understated. One commenter states that the data the FAA used was based on national averages while all of the airplanes in question are located in Alaska. The commenters also state that the load factors and operating costs in Alaska are much higher than the rest of the country.

FAA Response: The FAA agrees with the commenters and will not prohibit qualified (as prescribed by § 135.113) single-engine airplanes, namely single-engine Otters, from carrying a revenue passenger in the copilot seat.

Proving Tests. Several commenters suggest that for operators who are switching from part 135 to part 121, the FAA should allow proving tests on revenue flights. Other commenters contend that since the airplanes they are using and the routes they are flying are not changing, the FAA should not require a proving test. Still other commenters state that the FAA's estimate of \$437 hourly airplane operating costs was too low. (This rate includes crew, maintenance, and fuel costs.) The commenters' estimates range from \$750 to \$1,050 per hour versus the FAA's average estimate of \$483 per hour for 20-to-30-seat airplanes and \$463 per hour for 10-to-19-seat airplanes. Finally, some part 135 operators commented that they already meet many of the part 121 requirements and should not have to have a proving test.

FAA Response: For most part 135 operators, the biggest affect the NPRM would have on them would be the establishment of a dispatch system. Thus, for some operators, the FAA could devise tests that would entail only limited in-flight proving tests. This could be done almost entirely from the operator's dispatch center. For the initial upgrade to part 121, the FAA will not require compliance with the initial airplane proving tests requirements of section 121.163(a) for airplanes already used by the affected commuters in part 135 operations.

As for the hourly airplane operating cost, some of the commenters provided hourly-charter rates. However, the cost of the rule would not necessitate that operators give up a revenue or charter flight to complete the proving test. Therefore, the cost of the rule would be only the direct operating cost of the airplane based on a direct operating cost rate and not the charter rate. The FAA's estimate was consistent with estimates provided by several airplane manufacturers.

Management Personnel. One commenter says that a number of their management personnel would not meet the new criteria and that they would have to hire all new personnel or a consultant. Other commenters argue that existing personnel should be "grandfathered in" under the final rule. Another commenter says that the requirement for part 121 operators that a director of maintenance have five

prior to being hired. Thus, the FAA is changing the requirement to three years of experience in the past six years.

Definition of Commuter Air Carrier. Several commenters disagree with the FAA's proposal to remove the frequency of operation from the definition of a "commuter operations". The existing requirement defines a commuter as one conducting five or more scheduled round-trips per week. This allows on-demand operators to conduct up to four scheduled operations per week. The commenters provide only general comments that the new definition would impose costs.

FAA Response: The FAA agrees with the commenters that the frequency of operations test in part 135 should remain.

6. Benefits

The comments received on the estimated benefits mostly pertained to the FAA's use of a general-accident-rate approach to estimating benefits. The commenters object to the FAA's use of a broad-based accident rate rather than identifying specific historic accidents that the NPRM could have prevented. Other commenters note that the FAA deviated from its usual method of calculating benefits. This method is to identify specific types of accidents (based on the historical record) that would be prevented by a corresponding requirement of the proposed rule. Also, commenters indicate that the commuter accident rate has been declining over the past several years thereby making much of the rule unnecessary. Finally, commenters note that most of the accidents involved pilot error, which is not being addressed by the NPRM.

FAA Response: The FAA agrees that most of the historic accidents involved pilot error. However, many of the pilot error accidents were the result of the pilot's improper response to an emergency situation. An example of this would be an accident where an airplane experiences some mechanical problem or adverse weather and the pilot fails to follow the appropriate corrective procedures to prevent the accident. Even if the accident could not have been prevented, the pilot may have reacted in such a way that the damage or casualties were not mitigated to the extent that they could have been.

The FAA used a general or broad-based accident rate because the scope of the NPRM was broad, encompassing a wide range of safety issues from certification, operations, cabin safety, maintenance, etc. Similarly, the types of accidents the NPRM would prevent are also broad, based on a wide range of probable causes of historic accidents. For most of the accidents, the FAA could not determine if any one requirement of the NPRM alone could have prevented or mitigated the accident. This made it very difficult to divide the various probable causes of the accidents to the various requirements that could have prevented them. Thus, for the NPRM, the FAA contends that a general broad based accident rate is more appropriate.

The FAA agrees that the historic accident rate for part 135 operators has declined. However, that rate is still consistently higher than commuter-type operations under part 121. In the NPRM, the FAA acknowledged that in some respects the part 135 accident rate is higher due to some inherent differences in part 135 and part 121 commuter-type operations. In other respects, the part 135 rate is higher because those operators follow a different and less stringent set of safety rules than part 121. The FAA contends that much of the gap in the accident rate could be closed if all commercial passenger-carrying operators adhered to the higher part 121 standards of safety.

7. Other Areas of Interest

Projected Ticket Prices. Several commenters state that the projected ticket price increases of \$1.91 and \$.68, respectively for 10-to-19- and 20-to-30-seat airplanes is far off. Commenters from Alaska presented the strongest disapproval of FAA's projected ticket-price estimates.

FAA Response: The FAA's cost estimates of \$1.91 and \$.68 were not far off because most of the commenters' higher costs claims did not have merit. Except for some commenters from Alaska, the FAA did not receive any direct-cost comments related to these two estimates. Since these two cost

costs on, to the extent possible, in the form of higher ticket prices. Ticket price increases would be highest for all impacted operators during the first two to three years and decrease gradually thereafter.

After accepting some of the cost comments and making adjustments for changes in performance and certain equipment requirements, the commuter rule is estimated to cost \$118 million (as opposed to \$275 million in the NPRM). Based on this estimate, the average annual per ticket price increase for each of the two airplane-seat categories, over the next 15 years, will be far less than the original estimates.

VIII. Regulatory Evaluation Summary

Changes to Federal regulations must undergo several economic analyses. First, Executive Order 12866 directs that each Federal agency shall propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 requires agencies to analyze the economic effect of regulatory changes on small entities. Third, the Office of Management and Budget directs agencies to assess the effect of regulatory changes on international trade. In conducting these analyses, the FAA has determined that this Final Rule will generate benefits that justify its costs and is "a significant regulatory action" as defined in the Executive Order. The FAA estimates, however, that the final rule will not have a significant economic impact on a substantial number of small entities. No part of the final rule will constitute a barrier to international trade. These analyses, available in the docket, are summarized below.

A. Sections Without Cost Impacts

Those part 121 sections that the FAA has determined will not impose additional costs on part 135 commuter operators are not described in this summary evaluation. Each of those part 121 sections will not impose costs for one of the following reasons: (1) Current practice is identical or very similar to the new requirement; (2) the new requirement represents minor procedural changes; (3) the section determines general applicability and does not specifically impose any costs; or (4) certain requirements of part 135 would be incorporated into part 121 without change. Those part 121 sections without costs are described in the full evaluation under each of the areas for which they apply. While not shown in this summary evaluation, it is important to note that 10 of the sections in the final rule were identified as having negligible costs. These negligible costs, even when combined, will not be significant.

B. Sections With Cost Impact

The rule will impose costs on part 135 operators with 10-to-30-seat airplanes. The FAA estimates the total cost of the rule will be \$117.80 million over the next 15 years in 1994 dollars, with a present value of \$75.19 million (7 percent discount rate). The total potential costs for 10-to-19- and 20-to-30-seat airplanes are presented in the following areas:

| | 10-19 seats | 20-30 seats | Total cost | Present value |
|---------------------|-------------|-------------|------------|---------------|
| Operations | \$48.32 | \$24.87 | \$73.19 | \$46.18 |
| Maintenance | 12.93 | 5.26 | 18.19 | 11.93 |
| Cabin Safety | 5.99 | 5.58 | 11.57 | 8.20 |
| Part 119 | 2.73 | 0.63 | 3.36 | 2.30 |
| Certification | 10.39 | 1.10 | 11.49 | 6.58 |
| Total | \$80.36 | \$37.44 | \$117.80 | \$75.19 |

Based on the \$80.36 million figure shown above, the FAA estimates that, on average over the next 15 years, the price of a one-way airline ticket will increase by \$0.62 for affected operators with 10-to-19-seat airplanes. Similarly, based on the \$37.44 million figure, the ticket price will increase by \$0.30 for affected operators with 20-to-30-seat airplanes.

This section of the regulatory evaluation examines the costs of the changes with regard to operations. Fifteen-year costs for operations requirements will total \$73.19 million (\$46.18 million, present value). The cost items, by section, are provided below.

Section 121.97: Airports Required Data. Each domestic and flag air carrier must show that each route it submits for approval has enough airports that are properly equipped and adequate for the proposed operation. Consideration is given items as size, surface, obstructions, etc. In short, this requirement will ensure that in the event of a single-engine failure each operator's airplane type (regardless of the number of airplanes) can either stop at the end of the runway or, if it continues to fly, can safely clear all of the obstacles in the flight path.

To estimate the potential cost of this requirement, the FAA contacted several commuter operators. According to these operators, the potential cost of compliance is based on performance-obstacle-data analyses for airplane types at particular airports. To ensure that the performance objective will be met, operators are required to make certain that the maximum-allowable-takeoff weight is always achieved under certain temperature conditions. This is done by conducting performance analyses for each airplane type at the airport it intends to operate. To achieve this objective, operators typically hire a contractor to perform obstacle-location and height surveys. The contractor uses the airplane's flight-manual-performance data to assess flap settings and runway-end capability for a particular airport for information related to takeoff-run-acceleration distance, runway length, anti-skid, etc.

The typical contractor fee is \$20 per runway. For example, ABC airlines is a commuter operator with 5 types of airplanes that it wishes to operate at airports in 10 cities. Each city has an airport with 10 runways. The operator, however, only intends to use two runways per airport in each of the 10 cities. The cost performing the needed obstacle performance data analyses is \$2,000 (\$20 per runway \times 10 airports \times 2 runways per airport \times 5 airplane types). While this is a simple example of estimating a fictitious operator's potential cost of compliance, it sheds light on the difficulty of deriving such costs reliably. Although reliable information is available on the cost of contractor conducted obstacle-performance-data analyses, the same reliability does not apply to the number of runways or airports commuter operators will use. Potential costs for this requirement cannot be estimated reliably without knowing what airports, runways, and the types of airplanes operators will use. It is for this reason that this section of the evaluation contains no estimate for costs. Despite this situation, the FAA contends that this requirement is an important element in achieving the one-level-of-safety objective.

Section 121.99: Communications Facilities. Currently, this section requires each domestic and flag air carrier to show availability of a two-way air/ground radio communication system at points that will ensure reliable and rapid communications, under normal operating conditions over the entire route (either direct or via approved point-to-point circuits). Each carrier also must show that the system is accessible between each airplane and appropriate dispatch office, and between each airplane and the appropriate ATC unit. In addition, each system must be independent of any other system operated by the United States.

To estimate the potential cost, the FAA contacted several industry sources, including operators and data link service vendors. These sources indicated that the least expensive option for most operators would be a voice data link service from an FAA-approved vendor. According to Aeronautical Radio, Inc. (ARINC) and several operators with operations specifications for parts 121 and 135 (scheduled), the needed voice-data-link service consists of a monthly access fee of \$35 per operator and a fee of \$14 per contact. Contact refers to any form of voice communication between the pilot while in flight and the home dispatcher.

If, from a worst case standpoint, none of the current commuters have this access service, the total cost will be the number of affected operators times the monthly access fee of \$35 over the next 15 years. This evaluation estimates that the number of commuter operators will range from 63 in 1996

and operators times the \$11 contact fee gives the total potential contact cost of \$445 million (\$269 million, present) over the next 15 years. In realistic terms, however, this cost estimate is too high because it does not reflect the actual practice in industry. According to several operators, contacts via ARINC or a similar service would only be made during emergency situations (for example, flight delays, inclement weather, etc.). Within an average radius of 50 nautical miles, contacts can be made directly between the airplane pilot and the home dispatcher, without the aid of an external-communications-voice-data network (e.g., ARINC or a similar service). In flat lands, this communication can be made up to 100 miles, when the dispatcher is located at the hub. In high terrain areas, communication with the home dispatcher would have a radius of less than 50 miles. In emergency situations that arise beyond the average radius of 50 miles, ARINC or similar service would be needed. This would be especially true in remote areas such as the U.S. northern frontier (Montana, Idaho, etc.), Alaska, American Samoa, and Hawaii. This information indicates that frequency of use of ARINC or a similar service may not be as high as originally expected. According to some operators, the likelihood of having at least one contact via ARINC per airplane departure by an operator, on average, could range from 5 to 10 percent. When considering that contacts via ARINC or a similar service beyond the 50-mile radius would only be made in emergency situations, operators, on average, would make contact on 10 percent of their airplane departures. Employing this approach, costs will amount to \$44 million (\$26 million, present value) over the next 15 years.

In addition to the information above, industry sources contacted indicated that commuter operators with dual or split operations specifications (both parts 121 and 135) already have this capability. These operators (approximately 19) account for over 60 percent of all the airplanes in the U.S. commuter fleet. This scenario will result in estimated costs of \$18.9 million (\$11.5 million, present value) over the next 15 years. This cost estimate also recognizes that the number of contacts will be lower because pilots typically contact ATC for information related primarily to weather and air traffic delays. Therefore, this evaluation assumes only 10 percent of the commuter airplane departures, by operators without dual operations specifications, will engage in contacts via ARINC or similar service.

Section 121.135—Contents of Manual. This section will require an extensive list of manual contents for operators. Unlike part 135, part 121 requires more detailed instructions to flight and ground personnel, including dispatch procedures, airport information, and approach procedures. The manuals of part 121 operators are, on average, three times as voluminous as those of part 135 operators. Thus, compliance with the final rule will result in major rewrites of manuals. Based on cost information received from industry, affected operators will spend an additional \$50,000 on average (\$30,000 to \$70,000) each for new manuals. This cost estimate multiplied times the number of operators over the next 15 years will total approximately \$3.65 million, (\$3.28 million, present value). This cost estimate for manuals takes into account additional preparation and distribution requirements.

Section 121.337—Protective Breathing Equipment (PBE) for the Cockpit. This section will require PBE units for persons operating airplanes under part 121. Part 135 has no PBE requirement. While commuter airplanes are typically smaller than airplanes operating under part 121, the accessibility of PBE in the cockpit will provide smoke-and-fumes protection for pilots. The airplane operator is allowed to use fixed equipment such as oxygen masks and smoke goggles at each pilot station. Depending on the present airplane configuration, this may require substantial modifications.

According to FAA's technical personnel, airplanes with 20-to-30 seats already have fixed PBE units for pilot stations in the cockpit for smoke and fume protection but they are not equipped with a portable PBE unit for fire fighting. In terms of operators with 10-to-19-seat airplanes, the FAA is uncertain as to how many part 135 operators are already equipped with PBE (portable or fixed) in the cockpit. As the result of this uncertainty, this evaluation assumes that part 135 operators with 10-to-19-seat airplanes are not currently equipped with PBE in the cockpit. This evaluation also assumes that operators with 20-to-30-seat airplanes do not have portable PBE in the cockpit for firefighting. The installation of fixed PBE in some commuter airplanes could be prohibitively expensive because of complex breathing gas supply requirements. Since portable PBE is much cheaper than fixed PBE, operators with 10-to-19-seat commuter airplanes are assumed to acquire and install portable smoke and fume PBE in the cockpit

airplanes with either thunderstorm detection equipment or approved weather radar. However, section 135.175 requires operators of airplanes with 20 to 30 passenger seats to equip their airplanes with weather radar. An estimated 90 percent of all commuter airplanes with 10-to-19 passenger seats already have approved weather radar equipment. Based on this information, the rule will only affect an estimated 10 percent of those operators of airplanes with 10-to-19 seats (excluding commuter operators in Alaska and Hawaii which are not covered by the rule). Because of their unique flying environments, commuter operators in Hawaii and Alaska are not required under current regulations to be equipped with weather radar equipment. Weather radar costs approximately \$30,000 per airplane, including installation. Each weather radar unit weighs 25 pounds. This weight translates into an average weight penalty of 87 gallons of fuel per airplane per year. The sum of these cost components multiplied by the number of commuter airplanes over the next 15 years will total \$5.08 million (\$3.73 million, present value).

Sections 121.593–595: Dispatching authority for domestic and flag air carriers; 121.107: Dispatch centers; 121.533–535: Responsibility for operational control; 121.683: Crewmember and dispatcher record; 121.687: Dispatch release; and other sections that assign specific duties to dispatchers. The rule will require that flights in scheduled commuter operations with 10-to-30 seat airplanes be authorized by a dispatcher. Dispatchers currently are not required under part 135. The FAA assumes that the majority of operators currently certificated only under part 135 do not employ fully qualified dispatchers. These operators primarily employ full-time flight locators. The FAA further assumes that operators conducting both parts 121 and 135 operations currently employ half as many qualified dispatchers as they will need to dispatch all of their flights.

The number of dispatchers was primarily calculated using information provided by Airline Dispatchers Federation (ADF) and industry sources. The ADF estimated that an air carrier with 30 airplanes will need eight or nine dispatchers to staff a 24-hour operation. The FAA used a ratio of eight dispatchers to 30 airplanes of 10 or more passenger seats for each part 135 commuter air carrier. The total number of required dispatchers was computed by multiplying the number of airplanes with 10 or more passenger seats operated by each air carrier by the ratio 8 to 30. However, to take into account that an 8-hour day might not cover all of an air carrier's daily flights, as well as vacation and sick leave, the FAA assumes that each air carrier will need at least two dispatchers. In 1996, 307 dispatchers will be needed to meet the requirements of this rule. In 1997, the number of dispatchers will be 318 and will grow to 353 by 2010.

Unlike in regulatory evaluation for the proposed rule, the cost of compliance for the final rule is based primarily on the median annual salary differential between flight locators and dispatchers. The FAA estimated the median annual salary of a part 135 dispatcher on the hourly wage of \$9.10 reported by the ADF. The FAA computed an annual median salary of \$23,849 for a dispatcher by multiplying the ADF's hourly wage rate estimate of \$9.10 times a fringe benefits factor of 1.26 (or 26 percent) and full-time yearly hours of 2,080 (52 wks. \times 40 hrs.). Similarly, the median annual salary of a flight locator was estimated to be \$19,656 ($\$7.50 \times 1.26 \times 2,080$). The annual median salary differential was estimated to be \$4,193 (\$23,849 less \$19,656).

Based primarily on information received from FAA technical personnel and industry (operators and ADF's comments on the NPRM), about 67 percent of the required flight dispatchers will come from existing part 135 flight locators and approximately 33 percent of the required dispatchers will be hired from outside by operators. Some of these new hires will be supervisors/trainers. According to several commuter operators contacted recently, they will have to hire dispatchers from outside of their company in order for them to meet the proposed dispatcher requirements. The decision to hire dispatchers from the outside is based primarily on: (1) The need for additional supervisory personnel because of the projected number of inexperienced dispatchers to be hired under part 121 and (2) all of their existing personnel (flight locators and to some flight followers) cannot be trained at once without seriously disrupting daily operations. Thus, of all the new dispatchers projected to be hired over the next 15 years, about 67 percent will be from existing personnel (upgraded from flight locators and some flight followers) with the affected commuter operators and 33 percent from the outside (or non-upgraded employees).

Total personnel-related costs were calculated by adding the salary, training, administrative costs, and multiplying by the number of new dispatchers required. The FAA estimates that the dispatcher requirement will cost \$42.86 million (\$25.9 million, present value) over the next 15 years. Approximately \$25.66 million (\$15.49 million, present value) will be borne by operators of 10-to-19-seat airplanes, and the remaining \$17.20 million (\$10.38 million, present value) will be borne by operators of 20-to-30-seat airplanes.

According to the ADF, most part 135 operators already have facilities and communications equipment that satisfy the dispatch requirements under part 121. Accordingly, the FAA has not included estimates of additional costs attributable to facilities and equipment. The FAA acknowledges that this is a reasonable assessment since all commuter operators exercise some degree of operational control with the use of either flight locating or flight following. The provision of either one of these services requires communication facilities and associated equipment.

Section 121.383: Age-60 Requirement. This section will prohibit operators of airplanes in scheduled service with 10-to-30 passenger seats from using people over the age of 60 as pilots for that service. Currently there is no age restriction for pilots in part 135 operations. Based on data provided by the Air Line Pilots Association (ALPA), the FAA estimates that only about 0.55 percent of part 135 commuter pilots are currently over the age of 60. The FAA estimates that about 45 pilots will be affected if the requirement takes effect in the year 1999. The FAA also estimates, based on ALPA data, that 0.32 percent of current part 135 pilots would reach age 60 in subsequent years and thus about 27 pilots would need to be replaced each year from 1999 on.

The FAA is unable to quantify the costs to operators or to affected pilots. The nature and magnitude of these costs depend upon the alternatives available to each party, which the FAA has been unable to identify in sufficient detail to estimate costs. The FAA believes that the four-year phase-in of this requirement will help to minimize any potential disruptions the rule may cause and that the resulting cost are not likely to be substantial. The FAA also believes that the age 60 requirement is essential to achieve the "one level of safety" goal established by the Secretary of Transportation and that any cost of this requirement is justified by its benefits.

2. Cabin Safety

This section of the regulatory evaluation examines the costs of the changes with regard to cabin safety. Over the next 15 years, costs for cabin safety items will total \$11.57 million (\$8.20 million, present value). The cost items, by section, are provided below.

Sections 121.133, 121.135, and 121.137—Flight Attendant Manual. These sections will require all flight attendants to have an operations manual. There is no such requirement for flight attendants currently working for part 135 operators. This requirement necessitates preparing such manuals for each flight attendant. Since each flight attendant is required to have a manual, the number of manuals equals the number of flight attendants. The 15-year cost for the preparation, copying, and binding of these manuals is \$61,600 (\$47,200, present value). The costs involve the preparation of the manual contents and the copying and binding of the finished manual. FAA analysis projects 277 20-to-30-seat airplanes in 20 air carriers in 1996, increasing to 556 such airplanes in 39 air carriers by 2010. Each air carrier will employ a flight attendant supervisor (paid at \$24.19 per hour) and a clerical worker (paid at \$11.00 per hour) to spend 40 hours each preparing a manual; hence, it will cost each air carrier about \$1,400 to prepare a manual. The manual is an average of 100 pages long; at \$.10 to copy each page, and \$2 to bind each manual, total copying and binding costs is expected to total \$12 for each manual. Existing air carriers with new airplanes in the future will have to reproduce a new manual for each airplane. All new air carriers with 20-to-30-seat airplanes, which will total 19 by 2010, will also have to prepare and publish flight attendant manuals.

Section 121.285 and 121.589—Carry-On Baggage. These sections will require affected operators to stow carry-on baggage and develop a program to screen carry-on baggage. Screening, in this context,

carrier will outline its procedures for a baggage program.

The 15-year cost for operators of 10-to-30-seat airplanes to prepare a carry-on baggage addendum to the Operations Specifications will be \$20,600 (\$18,500, present value). This cost is divided between 10-to-19-seat airplanes (\$12,300) and 20-to-30-seat airplanes (\$8,300). For each air carrier, this process involves two people—a flight attendant supervisor for 20-to-30-seat airplanes or a crewmember supervisor for 10-to-19-seat airplanes (both paid at \$24.19 per hour) and a clerical person (\$11.00 per hour) to do the paperwork (average of 8 hours each) and to develop the addendum. Each carrier will bear the cost of developing the addendum for the airplanes in its fleet; it costs each air carrier about \$280 for this work. The number of air carriers is projected to rise from 63 in 1996 to 73 in 2010. Finally, the actual baggage screening function will not impose costs because part 135 crewmembers are already required to screen baggage in order to secure it.

Section 121.291(d)—Ditching Demonstration. This section requires new air carriers to conduct a ditching demonstration for each airplane type it proposes to operate in extended overwater operations. There is no similar requirement in part 135.

In the NPRM, the FAA used an estimate that 25 percent of all 10-to-30-seat airplanes conduct extended overwater flights. Upon further examination, this assumption turned out to be too high. Based on a recent survey, the FAA has ascertained that less than 3 percent of all 10-to-19 seat airplanes (14 airplanes) and no 20-to-30-seat airplanes currently conduct overwater flights. The percentages were projected into the future. Based on this paucity of airplanes certificated for extended overwater flights, the FAA tried to estimate the costs for part 135 operators to conduct ditching evacuation demonstrations for new 10-to-30-seat airplanes using two different methods. In both cases, as will be shown below, the 15-year cost for part 135 operators to conduct ditching evacuation demonstrations for new 10-to-30-seat airplanes will be zero.

The first method involves taking an aggregate approach and examining the entire fleet using the same methodology used in the NPRM. This involves a demonstration which requires crewmembers to perform ditching evacuation drills and safety procedures including the deployment of one raft. For both 10-to-19- and 20-to-30-seat airplanes the annual incremental change in the number of airplanes times the applicable percentage of airplanes conducting extended overwater flights was zero for every year between 1996 and 2010. Accordingly, using this methodology, the cost will be zero.

The second method involved individually examining those air carriers that this provision affects. The FAA was able to identify those operators that conduct extended overwater operations with 10-to-30-seat airplanes. In every case, the airplanes involved were 10-to-19-seat types. Since the FAA is projecting only a modest increase in such airplanes through 1997 and an overall decline in 10-to-19-seat airplanes after 1997, it is highly unlikely that these operators will seek to increase their fleet size with a new airplane make and model currently not in its fleet that will require a ditching evacuation demonstration. Therefore, there will be no cost.

Both the operator and the FAA incur labor costs to complete a ditching demonstration. The actual demonstration takes about one hour to complete and requires two sets of crews. If an operator should need to conduct a ditching demonstration, the FAA estimates the cost for a 10-to-19 seat airplane at \$1,025 per demonstration.

Section 121.309—Medical Kits. This section will require affected commuters to have one medical kit on each 20-to-30-seat airplane for those operators. The FAA has decided to except 10-to-19-seat airplanes from this requirement due to their smaller size and the unlikelihood that a medical professional will be on board or a flight attendant to administer the use of the kit.

The FAA estimates that the 15-year cost for providing medical kits on the 20-to-30-seat airplanes operating under part 135 will be \$1.11 million (\$674,300, present value). The costs of providing medical kits are composed of acquisition (\$200 each) with a 60 percent spares reserve, installation, annual replacement (5 percent), annual maintenance (\$20 per kit), a weight penalty (7 pounds per unit), physician

Historical data on part 121 airplanes shows one medical emergency for every 124,647 passenger enplanements. The FAA assumes that the medical emergency rate is the same on 20-to-30-seat airplanes since all air carriers serve the same base population. The FAA estimates 70 medical emergencies in 1996 and 77 medical emergencies in 1997. A physician consultation will be required twice a year per air carrier to obtain certain contents, such as prescription drugs, for the medical kits at a cost of \$500 per consultation. In 1996, for the 20 projected air carriers, total consultations will total \$20,000. Record keeping will be needed per medical emergency; it will take one hour to write up each emergency. At \$20.58 per hour, in 1996, record keeping costs will total \$1,433.

In the NPRM, the FAA assumed that the medical kits could be secured and installed with industrial strength Velcro tape. The FAA still believes that securing these kits with Velcro (a low cost option, at \$20 per kit plus two hours for a Maintenance worker at \$20.58 per hour) will meet the 18-G requirement. Also, airplane manufacturers will need to spend \$1,500 for each make and model to account for the design and administrative costs involved with securing these kits and to comply with FAA regulations; with 8 makes and models, this totals \$12,000. This cost will be spread across the entire population of each make and model.

Section 121.309—First Aid Kit. This section will require 10-to-19-seat airplanes to have at least one first aid kit. Currently, part 135 requires all airplanes with greater than 19 seats to have one kit, but there is no requirement for airplanes with 10 to 19 seats to have a kit.

The 15-year cost of this requirement will be \$371,400 (\$267,400, present value). The costs of providing first aid kits are composed of acquisition (\$70 each based on industry survey) with a 35 percent spares reserve, installation, annual replacement rate (5 percent of total), a weight penalty (4 pounds), engineering and administrative costs, and annual maintenance (\$7 per kit). Costs are a function of the 10-to-19-seat airplane count, which ranges from 673 in 1996 to 543 in 2010.

Section 121.309—Halon Fire Extinguisher. This section will require commuter operators of 10-to-30-seat airplanes to replace existing or install fire extinguishers (2 per 10-to-30-seat airplane (one in cabin and one in cockpit) with halon fire extinguishers. For this analysis, the FAA assumes that no part 135 airplanes are currently equipped with halon fire extinguishers. Since part 135 airplanes are already equipped with fire extinguishers prior to complying with part 121 standards, there will be no additional maintenance costs or weight penalties for this equipment.

The 15-year cost of this requirement is \$442,900 (\$346,500, present value). The cost of this provision will involve purchasing the requisite number of halon fire extinguishers per airplane in 1996, a 13 percent spares reserve ratio, and a 5 percent recharge rate per year after 1996, and up-front administrative costs.

Section 121.549—Flashlight. This section will require commuter operators of 20-to-30-seat airplanes to acquire two additional portable flashlights for use by the flight attendant and the copilot. This section will also require 10-to-19-seat airplanes to acquire one additional portable flashlight for use by the copilot. The analysis assumes that no part 135 airplanes with 10-to-30 seats are equipped with portable flashlights. Based on a recent survey, a portable flashlight costs \$5 and 2 D alkaline battery cells cost \$2.25.

The 15-year cost of this requirement will be \$134,400 (\$82,000, present value) broken out between \$56,500 for 10-to-19-seat airplanes and \$77,900 for 20-to-30-seat airplanes. The cost of this provision will involve purchasing the requisite number of flashlights for airplanes in 1996 and for airplanes added to the fleet through 2010, 10 percent spares, 5 percent replacement rate for every year after 1996, and a weight penalty (1 pound per flashlight). The analysis also assumes that all batteries will be replaced each year.

Section 121.313—Cockpit Key. This section will require all required crewmembers of affected operators to have access to a key for the locking cockpit door. This lock and key requirement will provide additional security for equipment and instruments in the cockpit. This requirement only applies to 20-to-30-seat airplanes. Airplanes with 10 to 19 seats are not required to have locking cockpit doors and will not be affected by this requirement. The rule will require 20-to-30-seat airplanes to retrofit the cockpit door

in commuter operations are certificated to fly above 25,000 feet.; also, 10-to-19-seat airplanes are not required to have flight attendants on board. Of the 249 20-to-30 seat airplanes in 1995, 146 fly over 25,000 feet.

The 15-year cost to equip all affected 20-to-30-seat part 135 airplanes will be \$472,900 (\$299,200, present value). Costs primarily are composed of \$400 per oxygen unit and weight penalty.

Parts 121.333, 121.571, 121.573—Passenger Information. New cards will have to be prepared for 20-to-30-seat airplanes. Industry experience has shown that each card has a lifetime of approximately 3 years. Thus, every year, only one-third of the cards will normally be replaced.

The 15-year cost for the preparation of these cards will be \$125,000 (\$72,300, present value). Each air carrier having 20-to-30 seat airplanes (20 in 1996 growing to 39 in 2010) will incur preparation costs and will then need to prepare enough passenger information cards for all airplanes in its fleet. Preparation costs involve two people two hours each: a flight attendant supervisor (\$24.19 per hour) and a paperwork layout specialist (\$20.58 per hour). There will be no training costs, as the flight attendant could read the new passenger information material directly from the manual. Based on an industry survey, the FAA assumes that it costs \$1 to print and distribute each information card; a total of 5,353 cards will need to be produced in 1996.

Section 121.337—Protective Breathing Equipment (PBE) for the Cabin. This section requires a fire fighting PBE unit in the cabin on all 20-to-30-seat airplanes. The 15-year costs to supply all 20-to-30-seat airplanes total \$936,800 (\$595,600, present value). Costs are composed of PBE acquisition (\$400 per unit) with a 40 percent spares reserve ratio, installation (two hours of mechanic labor), engineering and administration costs, a 5 percent replacement rate per year, annual maintenance (\$40 per unit performed annually), and a weight penalty (5 pounds per unit, one unit per airplane).

Section 121.339—Life Rafts. This section requires all affected commuters conducting extended overwater operations to carry an additional life raft. The 15-year cost to equip the affected airplanes with an additional life raft will be \$265,100 (\$183,800, present value).

Section 121.340—Flotation Cushions and Life Vests. This section requires operators to provide a flotation cushion or life vest for each passenger seat on each airplane. In 1995, 10-to-19-seat airplanes average 18.66 seats per airplane and 20-to-30-seat airplanes average 28.99 seats per airplane. In this analysis, the FAA assumes that these ratios remain constant into the future.

The 15-year cost for providing flotation cushions or life vests on 10-to-30-seat airplanes will be \$7.50 million (\$5.53 million, present value) composed of \$5.03 million for 10-to-19-seat airplanes and \$2.47 million for 20-to-30-seat airplanes. The FAA assumes that 10-to-19-seat airplanes will not be able to install flotation cushions and hence will obtain life vests. In addition, even though some airplanes may have flotation cushions currently installed, the analysis assumes that all operators of 20-to-30-seat airplanes will replace existing seat cushions with flotation cushions. Data from industry sources place the same cost and weight on both items: \$50 and 2 pounds each. As the current seat cushions weigh the same amount, there will not be a weight penalty on the 20-to-30-seat airplanes. The total number of life vests and cushions per year is derived by multiplying the number of seats per airplane times the projected airplane count for the 10-to-19-seat and 20-to-30-seat airplane categories.

Section 121.391—Flight Attendants At The Gate. This section requires a flight attendant or other authorized person to stay on the airplane during intermediate stops while passengers are on board. The final rule adopts new section 121.393(a) for 10-to-19 seat airplanes to allow crewmembers (not necessarily a flight attendant) to stay near the airplane.

The only costs imposed on operators, as a result of this rule will be the training and documentation of authorized substitute personnel. Based on information received from FAA technical personnel, there will be no additional crewmember personnel costs for flight attendants or other crewmembers at the gate requirement due to the delay. In the NPRM, the FAA attributed additional compensation costs to

attendant or pilot to remain on the airplane at intermediate stops as long as passengers are on board. Generally, the 20-to-30 seat airplanes will use a flight attendant, while 10-to-19 seat airplanes will use a pilot. Under the third scenario, operators can allow a trained, authorized person to stand in for the flight attendant or pilot when coverage is needed due to flight delay. Not all air carriers have authorized personnel at all intermediate stops; this will put a cap on the amount of time that this option will be used. This third scenario will require 24 hours of training for each authorized person (\$16.48 per hour) and documentation of personnel records by a clerical worker (paid at \$11.00 per hour for one hour of work per record). In the NPRM, the FAA assumed that non-Alaska operators would use the third scenario 20 percent of the time, and the FAA is keeping this percentage. Based on industry sources, the FAA does not believe it is very likely that air carriers in Alaska will have trained substitute personnel waiting at the intermediate stops to be used in the event that the airplane is delayed; thus, the third scenario will not be used. Currently, 88.4 percent of all 20-to-30 seat airplanes and 91.9 percent of all 10-to-19 airplanes fly in areas other than Alaska, and this analysis projects these percentages into the future.

The 15-year cost for training and documentation of authorized personnel in areas other than Alaska on 10-to-30-seat airplanes will be \$20,500 (present value, \$12,700). This cost is the summation of the 10-to-19-seat airplane cost and the 20-to-30-seat airplane category cost. The cost for the 10-to-19-seat category is derived by multiplying the total 15-year cost for training and documentation (\$67,500) by the expected probability of occurrence for the third scenario (20%) and then multiplying by the percentage of the fleet not operating in Alaska (91.9%). The cost for the 20-to-30-seat category is derived by multiplying the total 15-year cost for training and documentation (\$45,500) by the expected probability of occurrence for the third scenario (20%) and then multiplying by the percentage of the fleet not operating in Alaska (88.4%).

3. Certification

This section examines the costs of the rule with regards to airplane certification and performance. The total 15-year costs for certification are \$11.49 million with a present value of \$6.58 million.

Part 121 Subpart I: Performance Criteria. In the NPRM, the FAA had stated its belief that all of the commuter airplanes would be able to meet the part 121 performance standards. Consequently, the only compliance cost would be a manufacturer's one-time recertification cost of \$5,000 per airplane. However, after additional FAA analysis and input from several commenters, the FAA realizes that some of these airplanes are not able to meet the part 121 performance standards. Further, there will be an enormous economic impact if the proposed rule were to be adopted for all commuter airplanes.

Airplanes operating under part 121 face stricter performance requirements than those faced by airplanes operating under part 135. Part 135 performance requirements allow greater gross take-off weights for a given runway length and, conversely, allow a shorter runway for a given gross take-off weight than are allowed under part 121 for high altitude and/or high temperature conditions. However, as airplane models' performance capabilities differ, a change in performance requirements has a different effect across airplane models.

For example, the SFAR 41 and predecessor category commuter airplane performance capabilities are such that compliance with the part 121 performance requirements would require them to offload so many passengers or cargo as to become unprofitable to operate in scheduled passenger service. Due to the potential substantial economic loss and the potential safety reduction that would result when many of these airplane operators substitute airplanes with fewer than 10 passenger seats for these airplanes, the FAA decides that they will have 15 years to meet the part 121 performance requirements. By allowing these airplanes to remain in scheduled passenger service, their operators will have a sufficient amount of time to profitably exploit these airplanes, to plan their replacement, and to reduce the potential impact on the resale price in other uses of these airplanes. In addition, this 15-year period will provide an opportunity for manufacturers to develop future airplanes that may be better substitutes than the current

to the increasing maintenance costs as airplanes age, the economic impact of these airplanes on scheduled passenger service is 30 years for the Twin Otter and 25 years for all of the other models. On that basis, the FAA projects that, in the absence of the commuter rule, 4 of these airplanes would still be in scheduled passenger service after 15 years.

Finally, these airplanes' market values will fall over time because the airplane ages because it takes an increasing level of expenditure on maintenance and replacement to keep the airplane airworthy for scheduled passenger service. Currently, the average market values for the pre-SFAR 41C airplanes are \$500,000 for the Twin Otter and the EMB-110; \$350,000 for the Beech 99; and \$250,000 for the SA-226 and the Beech 200.

In light of those factors as they relate to the pre-SFAR 41 airplanes, the FAA determines that a one-year compliance date would generate a 60 percent loss in these airplanes' average market values and this percentage loss is reduced by 2.5 percentage points per year for four years (e.g., the second year would have a percentage loss of 57.5 percent, the third year will be 55 percent, etc.) and by 5 percentage points per year thereafter. Thus, the percentage loss of the market value of these airplanes in 15 years will be 5 percent of that airplane's market value. On that basis, the FAA determines that in 15 years these airplanes will incur a reduction in market value of \$56,000 (\$20,000, present value).

SFAR 41 airplane models would also be affected by the part 121 performance criteria because these criteria are stricter than those in part 135. However, the part 121 performance requirements are very similar to the performance requirements in the ICAO Annex 8 flight operating requirements—the flight operating requirements under which these airplanes must fly in European scheduled service. As all of these airplanes are used in European scheduled service, they can comply with the part 121 performance requirements, but at a potential payload loss. There are some combinations of temperature, airport elevation (pressure altitude) and airport runway length that would require SFAR 41C airplanes either: (1) To unload one, two, or even three passengers from the currently permitted part 135 gross take-off weight; or (2) to operate out of airports with longer runway lengths in order to meet the ICAO Annex 8 performance requirements. For example, the minimum runway length for a Beech 1900-C airplane with a 16,600 lb. maximum takeoff weight (its maximum certificated load) from a pressure altitude of 1,000 ft. (a typical Midwestern airport) at 13 degrees Centigrade (standard day) would be 4,700 ft. under part 135 but would be 5,900 ft. under ICAO Annex 8. From another perspective, in order for a Beech 1900-C to operate under ICAO Annex 8 from an airport with a 4,700 ft. runway, the maximum allowable takeoff weight would be 14,900 lbs. in comparison to the 16,600 lbs. allowable under part 135. One commenter reports that these operating limitations may affect these SFAR 41 airplanes at as many as 65 airports at some point during the year. Nevertheless, for most of the temperatures, airport elevations (pressure altitude), runway lengths, and actual takeoff loads faced by these airplanes, the part 121 performance requirements, ICAO Annex 8 rules, and the part 135 performance requirements would have the same limiting effect on these airplanes' operations.

As a result, the FAA will allow SFAR 41 and predecessor category airplanes 15 years to comply with the part 121 performance requirements. With a 15-year time horizon, operators will be able to organize their schedules (for example, departing high temperature airports earlier in the morning), their airplane/airport pairings, etc. such that the costs in 15 years will be minimal.

Finally, the commuter category airplanes have the performance capability of meeting part 121 performance requirements. However, the manufacturers will need to document these capabilities for the approved flight manuals. This documentation will require about 20 hours of flight time at a per hour cost of \$1,500 (includes instrument calibration, engineering analysis, ground personnel review, etc.) for a total cost of \$30,000 per type certificate. In addition, there will be a one-time manufacturer's cost of \$5,000 per type certificate to obtain FAA approval for this flight manual revision. Thus, the one-time first-year cost for commuter category airplanes will be \$105,000.

Section 121.161(a)—Airplane Limitations: Type of Route. Section 121.161(a) requires that an adequate airport be within one hour flying time at single engine cruising speed along all points of the designated flight route. There is no similar requirement in part 135. This requirement is not expected to affect

compliance cost for this provision in the Regulatory Evaluation for the NPRM, three commenters report that these data do not currently exist for 10-to-19-seat airplane models and there is a cost to developing these data. Based on those comments, the FAA determines that manufacturers' will incur a one-time first-year cost of \$1,900 per type certificated model, resulting in a one-time first-year compliance cost of \$24,700 for the 13 type-certificated airplanes.

Section 121.305(j)—Third Attitude Indicator. This section requires that a third attitude indicator be retrofitted on all affected airplanes (manufactured before March, 1997) within 15 years of the rule's effective date. Any affected airplane manufactured after March, 1997, must have the device. This device is not required under part 135 or part 23.

In the Regulatory Evaluation for the NPRM, the FAA had estimated that it would cost \$16,000 for a retrofit that would add about 5 lbs. of weight while the annual maintenance, inspection, and replacement costs would be about 10 percent of the retrofitting costs. The FAA had also estimated it would cost \$8,000 for an installation on a newly-manufactured airplane. The FAA had also determined that a third attitude indicator is standard equipment on the Beech 1900-D. The proposed rule had a 1-year compliance date. On that basis, the FAA had estimated that the 10-year cost would be \$19.2 million (\$18.4 million, present value).

The FAA estimates that the retrofitting cost will be \$16,000 and will add 15 lbs. of weight to the airplane. To eliminate the potential for down time, operators will retrofit this device during one of the airplane's 200-hour scheduled checks. On that basis, the FAA expects that this device will be installed in half of the 58 SFAR 41C airplanes in scheduled passenger service during the 13th year and in the remaining half during the 14th year. On that basis, the FAA determines that the 15-year compliance cost will be \$319,000 (\$116,000, present value).

Section 121.308—Lavatory Fire Protection. This section requires each lavatory to have a smoke detector system connected to either: (1) a warning light in the flight deck; or (2) a warning light or an aural warning in the passenger cabin that can be readily detected by a flight attendant. Section 121.308(b) requires each lavatory to have a built-in automatic fire extinguisher in each of its disposal receptacles. These requirements are also found in section 25.854 but only for airplanes type certificated after 1991. There are no such provisions in part 135 or part 23.

On that basis, the FAA estimates that for the 20-to-30-seat airplanes, there will be a first-year compliance cost of \$78,000 and an annual cost in each succeeding year of \$45,000 to \$58,000. The 15-year total cost will be \$858,000 (\$519,000, present value). In the Regulatory Evaluation for the NPRM, the FAA had estimated a 10-year total cost of \$263,000 (\$206,000, present value).

Section 121.310(l)—Flight Attendant Flashlight Holder. This section requires an emergency flashlight holder be available to the flight attendant. A flashlight holder is needed to keep the flashlight available and within reach of the flight attendant seat. This provision requires retrofitting within one year of the effective date of the rule. The FAA had not estimated any compliance cost for the flashlight holder in the Regulatory Evaluation for the NPRM. However, after additional analysis, the FAA found that there will be a per airplane cost of \$50 for a retrofit and \$25 for an installation on a newly-manufactured airplane. It will increase the airplane's weight by 2 lbs. In addition, there will be a one-time engineering design, development, and FAA approval cost of \$250 for each type certificated model. As there are no flight attendants in 10-to-19-seat airplanes, no flight attendant flashlight will be required and there will be no compliance cost for those airplanes. For 20-to-30-seat airplanes, the first-year cost will be \$42,000 and the annual cost thereafter will be between \$2,000 and \$6,000. The 15-year total cost will be \$88,000 (\$68,000, present value).

Section 121.312(b)—Passenger Seat Cushion Fire Blocking Materials. This section requires that 10-to-30-seat airplane seat cushions comply with the fire protection standards in § 25.853(b) within 15 years. The proposed rule had allowed a two-year compliance period with an option for two additional years if there were demonstrated compliance difficulties.

wear and tear) would be only due to the difference in the costs of the fire-blocking material, which was estimated to be \$5,000. There would be no incremental labor costs because it would take as long to replace a fire-blocked cushion with a fire-blocked cushion as it would take to replace a non-fire-blocked cushion with a non-fire-blocked cushion. The FAA had also estimated that 10 percent of the 10-to-19-seat airplanes have fire blocked seats because they are offered as an option on currently manufactured models. Further, the FAA had estimated that it would cost \$50,000 for engineering, developing, testing, and documenting the results for FAA approval for those airplanes no longer in production. Finally, allowing operators four years to comply means that they can schedule this retrofitting to fit into the normal cushion reupholstery schedule. Consequently, the existing cushions would not have been prematurely replaced before they would have been replaced due to normal wear and tear.

Based on information received from industry, the FAA estimates that the average retrofitting cost (weighted by the number of each type of airplane model in the existing fleet) will be \$21,500 and the average new-installation cost (weighted by the number of new airplanes projected to be sold by each manufacturer) will be \$4,875. The average weight of 38 lbs. (for a 19 seat airplane) results in a yearly per airplane fuel cost of \$105. In addition, an industry source reports that airplane operators normally reupholster their seat cushions every four years. Further, the FAA estimates that there will be no engineering costs for current commuter category airplanes because all of the manufacturers offer the fire blocked seat cushions as an option and the engineering and FAA-approval costs have already been incurred. However, the FAA revises its engineering costs for each out-of-production airplane model from \$10,000 to \$5,000 because there are a sufficient number of fabrics that have been approved so that each manufacturer will not have to completely reengineer its seats.

In response to the increase in time (from 4 years to 15 years) to comply with the rule, the FAA assumes that no airplane that will be withdrawn from scheduled-passenger service during those 15 years will be retrofitted with fire-blocking-seat-cushion materials. Further, an operator of an existing airplane that will be employed in scheduled passenger service beyond the 15-year period will wait until the last moment (13 to 14 years) before performing the retrofit. Based on industry statements, commuter-category airplanes are being built with the expectation of a 25-to-30-year lifespan. Also based on industry statements, the initial cost (plus one or two cushion reupholsteries) is less than or about the same as a retrofit 10 or fewer years in the future. The FAA anticipates that beginning in 5 years, operators will only purchase new airplanes that have factory-installed-fire-blocked seat cushions. Over time, the compliance costs will increase because a greater number of these airplanes will carry the extra 38 lbs. of weight. On that basis, the annual compliance costs will begin at \$150,000 in the sixth year after the effective date and increase to \$1.25 million by the 13th year. The 15-year total will be \$5.88 million (\$2.55 million, present value).

Section 121.317(b)—Fasten Seat Belt Lighted Sign. This section requires that there be a lighted "fasten seat belt" sign that can be controlled by the pilot. In the Regulatory Evaluation of the Proposed Rule, the FAA had not estimated any compliance costs because it was believed that affected airplanes had these lighted signs. Based primarily on information received from industry, the FAA estimates that the total 15-year cost for the 2 lb. device will be \$522,000 (\$269,000, present value).

Section 121.342—Pitot Heat Indication System. This section requires all affected airplanes, within 4 years of the rule's effective date, to have a pitot heat indication system that indicates to the flight crew whether or not the pitot heating system is operating. Section 23.1323 requires a pitot heat system for most commuter category airplanes, but there are no requirements for a heat indication system.

In the Regulatory Evaluation for the NPRM, the FAA estimated a per airplane cost of \$500 for a retrofit and \$250 for installation on a newly-manufactured airplane. The FAA did not estimate a weight penalty or costs for inspection, maintenance, and repair, but it had estimated a one-time manufacturer cost of \$10,000 for initial engineering design, testing, and documentation for FAA approval. On that basis, the FAA had estimated that the compliance cost during each of the first four years would be

On that basis, the annual costs in each of the first 4 years will be between \$515,000 and \$535,000 and the annual costs in each year thereafter will be between \$17,000 and \$23,000. The 15-year total costs will be \$2.29 million (\$1.87 million, present value).

Section 121.349(c)—Distance Measuring Equipment. This section requires at least one approved distance measuring equipment (DME) unit within 15 months of the final rule publication date for operations under VFR over routes not navigated by pilotage or for operations under IFR or over-the-top. The FAA had estimated no compliance costs for this provision and there were no comments on this provision. After additional analysis, however, the FAA determines that some airplanes are affected by this requirement.

Based on the 1994 AOPA Pilot General Aviation Aircraft Directory and Avionics Directory and Buyer's Guide, the FAA estimates that the average price of a 25 lb. DME for an airplane is \$7,000 and it will cost another \$7,000 to retrofit for a total cost of \$14,000. The FAA General Aviation and Air Taxi Activity and Avionics Survey for 1993 reports that 3.1 percent of the turboprops in service (twenty-three 10-to-19-seat airplanes and ten 20-to-30-seat airplanes) do not have this device but that all newly-manufactured airplanes will have this device installed. On that basis, the FAA estimates that the first-year-compliance cost is \$434,000 (\$294,000 for 10-to-19-seat airplanes and \$140,000 for 20-to-30-seat airplanes) and the 15-year-compliance cost is \$452,000 of which \$303,000 is for 10-to-19-seat airplanes and \$149,000 is for 20-to-30-seat airplanes (\$418,000, present value of which \$281,000 is for 10-to-19-seat airplanes and \$137,000 is for 20-to-30-seat airplanes).

4. Maintenance

The FAA estimates that over the 15-year period, the total cost of compliance for the relevant maintenance sections affected by the final rule will amount to an estimated \$18.18 million (\$11.92 million, present value). A discussion of the individual maintenance costs is presented below.

Section 121.361 Applicability. The final rule requires all affected commuter operators to have an airplane maintenance program that is appropriate for part 121 operations. All part 135 commuters currently operating under a part 135 continuous airworthiness maintenance program (CAMP) will be required to revise and possibly upgrade their programs in accordance with the new part 121 standards. Currently, commuter operators of airplane type-certificated with a passenger seating configuration of 10 seats or more operate under a CAMP as specified in section 135.411(a)(2). Most differences among the respective part 135 operators' CAMP arise from the varying complexity of the different airplanes, not solely from the type of operation. Therefore, the only new requirement will be to revise and possibly upgrade part 135 operators' existing CAMP's, not to develop entirely new maintenance programs.

The FAA estimates the one-time total compliance cost of the maintenance applicability section is \$104,000. Of this total, \$63,000 will be incurred by operators of 10-to-19-seat airplanes and \$41,000 will be borne by operators of 20-to-30-seat airplanes. The FAA assumes, based on information received from its technical personnel, that an average of 80 hours will be required of each affected operator's maintenance shop foreman to review an operators' CAMP to ensure compliance with the final rule. Assuming a loaded hourly wage of \$20.58 for a maintenance foreman, the one-time cost estimate for each operator will be approximately \$1,650 ($80 \times \20.58).

Section 121.377 Maintenance And Preventive Maintenance Personnel Duty Time Limitations. The final rule will require all commuter operators to adhere to the part 121 limitation of time that maintenance and preventive maintenance personnel can be required to remain on duty. Section 121.377 requires maintenance personnel to be relieved from duty for a period of at least 24 consecutive hours during any 7 consecutive days, or the equivalent thereof within any one calendar month. Maintenance and preventive maintenance personnel employed by part 135 operators have no such duty time limitation.

The FAA maintained in the NPRM that simple adjustments in work scheduling or duty requirements of maintenance personnel were on-going costs of doing business which would not be affected by the commuter rule. Furthermore, the FAA held that the existence of union work rules, Department of Labor

for the maintenance foreman to perform the additional scheduling necessary to comply with the rule. The FAA estimates that a maintenance foreman will spend approximately 80 additional hours per year to meet the part 121 standards. Thus, the cost for non-Alaskan 10-to-19-seat operators in 1996 will be 23 operators \times \$20.58 \times 80 hours or \$37,870. For 20-to-30-seat operators, the cost in 1996 will be 25 operators \times \$20.58 \times 80 hours or \$41,000. The calculations would be the same in subsequent years.

Over the 15-year period, the total cost imposed due to the new duty-time-limitation requirement will be approximately \$6.02 million (\$3.65 million, present value). Most of this cost, \$4.68 million, falls on Alaskan part 135 operators of 10-to-19-seat airplanes. This disproportionate amount reflects the probable added labor requirements of Alaskan operators owing to the uniqueness of the Alaskan operating environment.

Section 121.380 Maintenance Recording Requirements. This section provides for the preparation, maintenance, and retention of certain records using the system specified in the certificate holder's manual. It further specifies the length of time records must be retained and the requirements for records to be transferred with the airplane at the time the airplane is sold. Section 121.380a, Transfer Of Maintenance Records, develops the transfer of records in more detail. It requires the certificate holder to transfer certain maintenance records to the purchaser, at the time of sale, in either plain language or coded form which provides for the preservation and retrieval of information. The section ensures that a new owner receives all records that are to be maintained by an operator as required under section 121.380.

In the NPRM, the FAA maintained that because section 135.439 was essentially identical to 121.380, there would be minimal new recordkeeping requirements imposed on part 135 operators and thus, assumed no incremental costs would result from changes to this section. The FAA also maintained that there would be no incremental cost impact resulting from changes to part 121.380a. Upon review of the proposal and subsequent comments received, the FAA has determined that the merging of the recordkeeping requirements of sections 121.380 and 135.439 brought on by the commuter rule will involve incremental administrative costs. The FAA therefore, has revised its NPRM position of no costs, and estimated the administrative costs for the new requirements incorporated in the changes to sections 121.380, 121.380a and 135.439.

The cost was derived from averaging the total recording cost for Alaskan commuter airplanes as provided by the AACA and applied to the total 10-to-19-seat airplane fleet. The AACA estimated the total first-year cost for Alaska operators to be \$156,000. This was divided by the number of 10-to-19-seat airplanes in Alaska (44) for an average cost of \$3,545 per airplane. This was then multiplied by the total number of airplanes in the 1996 U.S. fleet. In 1996, the number of airplanes will be 629 (673-44), 44, and 277 for 10-to-19-seat non-Alaska airplanes, 10-to-19-seat Alaska airplanes, and 20-to-30-seat airplanes respectively. For subsequent years, the additional reporting cost will be \$26,000 for the 10-to-19-seat airplanes in Alaska. The FAA divided that cost by the number of Alaskan airplanes (44) and then multiplied it by the total U.S. fleet. Thus, in 1997 the fleet count is 639 (683-44) 10-to-19-seat non-Alaska airplanes and 307 20-to-30-seat airplanes. The total costs for 1997 are \$26,000 for Alaska, \$377,590 ($\$26,000/44 \times 639$) for 10-to-19-seat non-Alaska, and \$181,409 ($\$26,000/44 \times 307$) for 20-to-30-seat airplanes. The same procedure is used for the remaining years. The total cost imposed on operators of part 135 airplanes due to the additional recordkeeping required to merge parts 121 and 135 maintenance recording requirements is approximately \$11.5 million (\$7.8 million, present value) for the 15-year period.

As a final point, this rule will impose costs on some part 121 operators by requiring them to maintain information on engine and propeller time in service as specified in section 135.439/121.380. The FAA concurs with a commenter's objection that for the few operators of older, part 121 propeller-driven airplanes, this will necessitate a substantial search-cost for historical records. In this instance the costs will not be borne by part 135 operators who, for the most part, utilize propeller-driven airplanes, but rather, by a few part 121 operators who do not utilize jet-driven airplanes. However, in the final rule, the FAA will make this requirement prospective only; those part 121 operators of propeller-driven

be \$3.36 million (\$2.30 million, present value).

Sections 119.33(c) and 121.163—Proving Tests. When an operator changes the type of operation it conducts or purchases an airplane that is new to a certain type of operation, that operator must undertake a proving test. A proving test generally consists of a non-passenger flight in which the operator proves that it is capable of safely conducting that type of operation or airplane. Going from a part 135 operation to a part 121 operation would be a change in operation and be subject to a proving test. Under the final rule, there would be two costs associated with proving tests—initial and recurring. The initial cost would be proving tests for upgrading the existing part 135 fleet that would become part 121. The recurring costs would be for any future operational or airplane changes that would normally require a proving test (as required by the existing rule).

The current regulation prescribes 50 hours of flight for a part 121 (section 121.163(b)(1)) proving test. This is the number that part 135 operators switching to part 121 will be subject to. However, the current rule also allows for deviations from the 50-hour requirement. A sample of FAA records on proving tests shows that, since 1991, there has been a wide range of hours actually flown for proving tests. This is because the amount that the operator is allowed to deviate from the prescribed number of hours is based on what that operator requests and on what the FAA will allow. However, based on the above sample, the FAA assumes for the purposes of this analysis that the average deviation will be down to a total of 15 hours.

The FAA recognizes that some operators who currently operate under a split certificate already have experience operating under part 121. Also, some part 135 operators already voluntarily comply with part 121 requirements for much of their operation. To the extent practicable, for these and possibly other operators, the FAA will not require a proving flight. However, some operators who will have to make significant changes to the operation as a result of the final rule will have to have a proving flight. The FAA anticipates that 50 percent of the estimated number of proving tests will not have to include a proving flight. The only cost to these operators will be the preparation and completion of the test for the dispatch system. For this analysis, the FAA assumes three days preparation for the manager, maintenance director, and secretary.

For those operators who must take the proving test, the cost will be the same three days preparation plus the 15 hours of flight time. The FAA estimates that the 15 hours of proving test flights will cost the operator approximately \$8,560 for a 20-to-30-seat airplane and \$7,000 for a 10-to-19-seat airplane. The difference in cost is due to the flight attendant being on board in the 20-to-30-seat airplanes.

The FAA estimates that there will be 90 proving tests necessary in 1996 to bring the existing fleet up to part 121 standards (assuming a proving test for each type of airplane for each part 135 carrier affected by the final rule.) The cost to the 60 part 135 operators in 1996 to complete the initial 90 proving tests would be approximately \$393,660 (\$367,900, present value). Of this cost, approximately \$128,300 would be incurred by operators with 20-to-30-seat airplanes and \$265,360 by operators with 10-to-19-seat airplanes.

The recurring costs would accrue over the next 15 years as affected operators conduct part 121 proving tests instead of part 135 proving tests. If the prescribed number of hours for part 135 and part 121 operators is 25 and 50 respectively, and the average deviation is 50 percent, then the difference in hours would be 13 $[(50-25) \times .5]$. Also, the FAA found from the survey of its records that, on average, operators conduct one proving test every four years, which equates to approximately 3 tests over the 15-year period.

The average number of operators in any given year over the next 15 years is 68. Based on this, the FAA will conduct approximately 14 $((68 \text{ operators} \times 3 \text{ tests})/15 \text{ years})$ proving tests annually: 8 for 10-to-19-seat airplanes and 6 for 20-to-30-seat airplanes. The FAA estimates that the increased cost of a proving test per part 135 operator would be \$6,050 for a 20-to-30-seat airplane and \$5,800 for a 10-to-19-seat airplane. For all affected operators, the final rule will impose approximately \$82,700

There are three other potential cost areas for the management positions required in the final rule. First, is the new recency of experience for first time Directors of Operations and Maintenance. Second, is the new Director of Safety position for both part 121 and part 135 operators. Third is the Chief Inspector, which will be a new position for those part 135 commuters who upgrade to part 121.

Recency of Experience. The final rule will impose new recency of experience requirements for those Director of Maintenance and Operations candidates who will have that title for the first time. In addition to other requirements, these candidates will have to have three years of experience (within their respective fields) within the past six years to be eligible for a Director position. This will ensure that those candidates who do not have any experience as a Director at least have recent on-the-job experience in their respective fields.

The potential cost of the recency of experience requirement is the reduction at any given time in the number of first-time candidates available for these positions. This is because some first-time candidates may have to acquire additional years of experience if they do not have it at the time that they are being considered for a Director position. It is extremely difficult to project how many future first-time Director candidates will be affected by the final rule. However, this will have little if any effect on an operator's ability to find potential applicants to fill a Director position. This is for three reasons. First, the FAA contends that the number of potential candidates who do not meet the recency of experience requirement both now and in the future is small in relation to the total number of potential applicants for a Director position. Second, the FAA contends that the supply of existing personnel who would qualify for a Director position, plus those who are already a Director, is sufficient to keep wages from increasing as a result of the new qualification requirements. Further, the new requirements are not substantive enough to cause wages to increase. Third, operators can always request authorization from the FAA to hire an applicant who has comparable experience. For the initial upgrade to part 121, the FAA will approve these authorizations to the extent practicable. Thus, the FAA contends that the final rule will not impose a hardship on operators in having enough potential qualified applicants to fill the Director positions.

Director of Safety. This is a new position for part 121 but the FAA contends that this position will impose little if any additional cost to operators. The rationale for this assessment is based on two factors: (1) There are no eligibility requirements for the Director of Safety so virtually anyone can be designated as such; and (2) most operators already have a Director of Safety or the equivalent.

Chief Inspector. For existing part 135 commuter operators who will now operate under part 121, the position of Chief Inspector will be new. The FAA contends that this requirement will impose little if any additional cost. Many part 135 operators already have personnel that are the equivalent of a Chief Inspector. The operator may petition the Administrator to combine positions or request authorization to appoint someone who has comparable experience. For the initial upgrade to part 121, the FAA will consider these requests on a case-by-case basis.

On-Demand Operators Conducting Scheduled Operations. Under part 135, on-demand operators will be allowed to conduct up to four scheduled operations a week and still remain an on-demand operator. There is no such allowance in part 121. Thus, if a current on-demand operator conducts even one scheduled passenger flight with a 10-to-30-seat airplane, then that airplane must be upgraded to and the operation flown under part 121. The FAA has identified 5 airplanes in the current fleet with 10 to 19 seats that are used by on-demand operators in scheduled service. To bring these airplanes up to the part 121 standards will cost approximately \$1.73 million (\$1.18 million, present value). The components behind this estimate are provided below (explanations of these costs components are provided in their respective sections).

C. Benefits

The commuter segment of the U.S. airline industry is a vital and growing component of the nation's air transportation system. Commuter airplanes transport passengers between small communities and large

operate within a seamless ticketing environment, in which the large carrier issues a ticket that often includes a trip segment on a commuter airplane. As these relationships between large carriers and commuter airlines continue to grow, it will become more common for the average long distance flyer to spend at least one flight segment on commuter airplanes.

The combined effect of a continuing growth in the commuter industry and the ever growing relationship between large carriers and their commuter counterparts will progressively blur the distinction between commuter carriers and larger air carriers. In other words, passengers will no longer readily distinguish between one type of carrier and another, but will simply view each component as a part of the nation's air transportation system. It is imperative, therefore, that a uniform level of safety be afforded the traveling public throughout the system. Air carrier accidents, perhaps more than accidents in any other mode, affect public confidence in air transportation.

What is the public value or benefit of air transportation? It would be nearly impossible to calculate something that has been so widely accepted in the American lifestyle. One figure that represents the very least value the public places on traveling by air is the annual amount the public spends on air transportation, or in other words, annual air carrier revenues. In 1994, the FAA estimated that amount to be \$88 billion. If public confidence wavers by only one percent, annual total air carrier revenues would be reduced by \$880 million, which is a minimum dollar estimate of the cost that would be experienced by the public in terms of being denied a fast, safe means of transportation.

Some studies have been done to measure the effect of change in public confidence. In 1987, the FAA studied the impact of terrorist acts on air travel on North Atlantic routes. The study investigated the relationship between the amount of media attention given to a specific terrorist act and reductions in air traffic. The study concluded that there was a measurable, short-term, carrier-specific correlation between the two. Following a well-publicized incident, ridership on the carrier experiencing the incident dropped by as much as 50 percent for a few months. In another instance, a major air carrier reported that two catastrophic accidents in 1994 resulted in a half-year-revenue loss to that carrier of \$150 million. These examples relate to carriers operating large airplanes, but they illustrate how the prevailing level of public confidence can affect the public use of air transportation.

It is clear that the American public demands a high degree of safety in air travel. This is manifested by the large amount of media attention given to the rare accidents that do occur, by the short term reductions in revenues carriers have experienced following accidents or acts of terrorism, and by the pressure placed on the FAA as the regulator of air safety to further reduce accident rates.

The FAA is confident that the final rule will further reduce air carrier accidents. The final rule will require dozens of changes to the way that smaller air carrier airplanes are built, maintained, and operated—all aimed at eliminating or at the very least minimizing the differences between small and large airplanes and the way they operate. Many of these changes result in small, unmeasurable safety improvements when examined in isolation, but taken together result in a measurable difference. That measurable difference ultimately is to bring commuter accident rates down to the very low level of that of the larger carriers. That rate is nearing the point of rare, random events.

What follows is a quantified analysis of the potential benefits of the final rule based on the assumption that it will reduce the number of commuter airplane accidents and (possibly mitigate the severity of those casualties in accidents that will occur). The analysis finds that measurable potential benefits substantially exceed the cost of the final rule, but the FAA believes that the larger but unquantifiable benefit is continued public confidence in air transportation.

Safety Benefits From Preventing Accidents. The intent of the Commuter Rule is to close, to the extent practicable, the accident rate gap between airplanes with 10 to 30 seats currently operating under part 135 and airplanes with 31 to 60 seats operating under part 121. The smaller "commuter-type" part 121 airplanes were used for comparison because their operations best resemble those of commuters than do larger part 121 airplanes. If the accident rate gap were completely closed, the FAA estimates

annual number of scheduled departures for each group to derive the annual accident rates. After calculating the 10-year historical average accident rates, the FAA took the difference in the accident rates between the part 135 airplanes and the part 121 airplanes. The difference in rates was then multiplied by the projected annual number of scheduled part 135 departures of airplanes with 10 to 19 seats and 20 to 30 seats from 1996 to 2010. Each step of this estimation procedure is described in detail below.

The Accident Database. The NTSB defines an accident as an occurrence associated with the operation of an airplane which takes place between the time any person boards the airplane with the intention of flight and the time such that persons have disembarked, and in which any person suffers death or serious injury or in which the airplane receives substantial damage. The FAA looked at only those accidents for which the final rule could have an effect. Accidents in which the probable cause was undetermined, the result of turbulence, or was related to the ground crew were not included in the database. The FAA also excluded midair collisions, since the current airspace rules (Mode C, TCAS, positively-controlled-airspace areas, etc.) would not be affected by the final rule. Finally, the FAA excluded accidents involving unscheduled and all-cargo operations.

Annual Accident Rate. Based on the annual number of accidents from the database and the annual number of departures, the FAA estimated the accident rates for 10-to-30-seat airplanes operating under part 135 and 31-to-60-seat airplanes operating under part 121. From 1986 to 1994, the FAA found that part 135 airplanes with 10 to 19 seats were involved in accidents at a rate of .32 accidents per 100,000 departures and airplanes with 20 to 30 seats occurred at an average rate of .17 accidents per 100,000. Accidents involving part 121 airplanes with 31 to 60 seats had an average accident rate of .13 accidents per 100,000 departures.

The Average Cost of a Part 135 Accident. From the accident database discussed above, the FAA found that the average part 135 accident involving 10-to-19- and 20-to-30-seat airplanes cost \$6.3 million and \$24.6 million, respectively.

Estimating Potential Benefits. To estimate the benefit of closing the accident-rate gap between part 135 and part 121 airplanes, the FAA took the difference in average accident rates for 10-to-30-seat part 135 airplanes and 31-to-60-seat part 121 airplanes and multiplied them by the projected annual number of departures for 10-to-30-seat part 135 airplanes. This gives the projected annual number of accidents that the final rule could prevent. The FAA estimates that, from 1996 to 2010, 67 accidents could be prevented. Multiplying the number of potential accidents by the average cost of a part 135 accident (\$6.3 million for 10-to-19-seat airplanes or \$24.6 million for 20-to-30-seat airplanes) results in total potential benefits of \$588.2 million (\$350 million, present value).

The extent to which the accident rate gap closes will determine how much of the \$350 million in potential benefits is actually achieved. Based on the scope of the final rule, the FAA anticipates a significant closing of this gap.

D. Comparison of Costs and Benefits

Over the next 15 years, the Commuter Rule will impose total costs of \$117.80 million, with a present value of \$75.19 million. Of the total costs, \$80.36 million will be for airplanes with 10 to 19 seats and \$37.44 million will be for airplanes with 20 to 30 seats.

The benefit of the Commuter Rule is its contribution to closing the accident rate gap between part 121 and existing part 135 commuter operators. The FAA estimates that closing this gap will prevent 67 accidents over the 15 year period for a total present value benefit of \$350 million. It is not certain how much of the accident-rate gap the final rule will close. In view of this uncertainty, the FAA contends that the final rule will be cost-beneficial because it will have to be only 21 percent effective for costs to equal benefits. Given the broad scope of the rule, the FAA anticipates that, at a minimum, the rule will be this effective and more.

- Providing more or better crew training to properly respond to the problem after it occurs (Air Carrier Training Program rule);
- Providing a dispatcher to help identify a problem before it becomes a potential accident (Commuter rule); and
- Ensuring pilots are not over-worked and tired (The Rest and Duty NPRM).

The Commuter Rule only addresses a portion of the necessary requirements to close the accident-rate gap. If the \$75 million present value cost of this rule is combined with the \$51 million in cost-savings of the Flight and Duty NPRM, and the cost of Pilot Training, \$34 million, the total cost, \$58 million (\$34 - \$51 + \$75), is still less than the estimated \$350 million benefit of eliminating the accident-rate gap. These rules combined need only be 17 percent effective to be cost-beneficial.

E. International Trade Impact Assessment

Overview. The final rule will have a minimal effect on international trade. Although there are a number of across-the-border commuter services between the U.S., Canada, and Mexico, they represent a small number of routes and airplanes. The only other concern with regard to international trade is airplane sales. There is the potential that increased equipment requirements and standards may limit the ability of commuter airplanes manufactured for the U.S. market to be resold to buyers in developing nations. Often, these countries do not have extensive safety requirements and may prefer less sophisticated airplanes.

International Routes. Most of the nation's 63 commuter airlines operate almost exclusively on domestic routes, with only limited international operations and no transoceanic routes. The majority of these international operations are across-the-border services between cities in the United States and locations in Canada and Mexico. There are relatively few carriers engaging in this kind of commuter service, with only a limited number of flights. Most of these services are between points in the border states, such as California, Arizona, Texas, Wisconsin, Michigan, Washington, and New York, flying to Mexican and Canadian cities. Although the final rule may require some foreign carriers to comply with its requirements, the primary effect will still be borne by the domestic air carrier market with a minimal affect on international trade.

Airplane Sales. Commuter airplanes are sold on a worldwide basis, and this creates the potential for international trade impacts. The final rule could affect the competitiveness of airplanes made for the U.S. market that are resold internationally. Under the final rule, commuter airplanes made for the American market would include new equipment and upgrades necessary to meet expanded safety requirements. These improvements will increase the cost and maintenance requirements for the airplane and could negatively affect their sales potential in foreign markets, particularly to customers in developing nations.

Many small air carriers in the developing world fly under significantly lower safety requirements than are required in the United States. Operators are generally not motivated to purchase airplanes that exceed their countries' minimum requirements. Further, these operators sometimes lack the facilities, equipment, and expertise that are necessary to keep sophisticated systems operational. Therefore, when purchasing either new or second-hand airplanes, operators tend to focus on airplanes that rely on a minimum of complex systems and equipment and that meet their basic requirements at the lowest cost.

Although sales of smaller airplanes to the developing countries represent an important component of the market, the largest market by far is in North America. In this case, since the airplanes will have to operate under the same standards as before their resale, there would be no impact. According to recent estimates, the worldwide market for commuter airplanes is estimated to be almost \$20 billion over the next 15 years, with a projected 59 percent of those sales occurring in North America. Sales to Europe account for approximately 20 percent of the total sales.

cost to a small scheduled commuter operator that is equal to or greater than \$67,000 (1994 dollars). The entire fleet of a small scheduled commuter operator has at least one airplane of seating capacity of 60 or fewer seats. The annualized net compliance cost to a small operator whose entire fleet has a seating capacity of over 60 seats is \$119,900 (1994 dollars). A substantial number of small entities is defined as a number that is 11 or more and that is more than one-third of small commuter operators subject to the final rule.

The FAA is requiring certain commuter operators that now conduct operations under part 135 to conduct those operations under part 121. The commuter operators that will be affected are those conducting scheduled passenger-carrying operations in airplanes that have a passenger-seating configuration of 10 to 30 seats and those conducting scheduled passenger-carrying operations in turbojets regardless of seating configuration. The rule will revise the requirements concerning operating certificates and operations specifications. The rule will also require certain management officials for all operators under parts 121 and 135. The rule will increase safety in scheduled passenger-carrying operations and clarify, update, and consolidate the certification and operations requirements for persons who transport persons or property by air for compensation or hire.

The total present value cost to small entities with 10-to-19-seat airplanes is \$16.7 million. The section on operations represents \$10.1 million or 64 percent of the total. The section on maintenance represents \$4.0 million or 24 percent of the total. The total present value cost to small entities with 20-to-30-seat airplanes is \$4.0 million. The section on operations represents \$2.9 million or 73 percent of the total. The section on part 119 represents \$416,000 or 10.4 percent of the total.

This determination shows that for an operator with only 10-to-19-seat airplanes, the average annualized cost will be \$61,900 and for an operator with 20-to-30-seat airplanes, the average annualized cost will be \$35,600. Given the threshold annualized cost of \$67,000 for a small commuter operator (with 60 or fewer seats), the FAA estimates that this final rule will not have a significant economic impact on a substantial number of small entities. A complete copy of the Regulatory Flexibility Determination is in the public docket.

Federalism Implications

The regulations do not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among various levels of government. Thus, in accordance with Executive Order 12612, it is determined that such a regulation does not have federalism implications warranting the preparation of a Federalism Assessment.

Paperwork Reduction Act

The information collection requirements associated with this rule have been approved by the Office of Management and Budget, until December 1998, in accordance with 44 U.S.C. Chapter 35 under OMB No. 2120-0593, TITLE: Commuter Operations and General Certification and Operations Requirements.

Conclusion

For the reasons set forth under the heading "Regulatory Analysis," the FAA has determined that this regulation: (1) Is a significant rule under Executive Order 12866; and (2) is a significant rule under Department of Transportation Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). Also, for the reasons stated under the headings "Trade Impact Statement" and "Regulatory Flexibility Determination," the FAA certifies that the rule will not have a significant economic impact on a substantial number of small entities. A copy of the full regulatory evaluation is filed in the docket and may also be obtained by contacting the person listed under "FOR FURTHER INFORMATION CONTACT."

Amendment 135-59

Revision of Authority Citations

Adopted: December 20, 1995

Effective: December 28, 1995

(Published in 60 FR 67254, December 28, 1995)

SUMMARY: This rule adopts new authority citations for Chapter I of Title 14 of the Code of Federal Regulations (CFR). In 1994, the Federal Aviation Act of 1958 and several other statutes conferring authority upon the Federal Aviation Administration were recodified into positive law. This document updates the authority citations listed in the Code of Federal Regulations to reference the current law.

DATES: This final rule is effective December 28, 1995. Comments on this final rule must be received by March 1, 1996.

FOR FURTHER INFORMATION CONTACT: Karen Petronis, Office of the Chief Counsel, Regulations Division (AGC-210), Federal Aviation Administration, 800 Independence Ave., SW., Washington, DC 20591; telephone (202) 267-3073.

SUPPLEMENTARY INFORMATION: In July 1994, the Federal Aviation Act of 1958 and numerous other pieces of legislation affecting transportation in general were recodified. The statutory material became "positive law" and was recodified at 49 U.S.C. 1101 *et seq.*

The Federal Aviation Administration is amending the authority citations for its regulations in Chapter I of 14 CFR to reflect the recodification of its statutory authority. No substantive change was intended to any statutory authority by the recodification, and no substantive change is introduced to any regulation by this change.

Although this action is in the form of a final rule and was not preceded by notice and an opportunity for public comment, comments are invited on this action. Interested persons are invited to comment by submitting such written data, views, or arguments as they may desire by March 1, 1996. Comments should identify the rules docket number and be submitted to the address specified under the caption "FOR FURTHER INFORMATION CONTACT."

Because of the editorial nature of this change, it has been determined that prior notice is unnecessary under the Administrative Procedure Act. It has also been determined that this final rule is not a "significant regulatory action" under Executive Order 12866, nor is it a significant action under DOT regulatory policies and procedures (44 FR 11034, February 26, 1979). Further, the editorial nature of this change has no known or anticipated economic impact; accordingly, no regulatory analysis has been prepared.

Adoption of the Amendment

In consideration of the forgoing, the Federal Aviation Administration amends 14 CFR Chapter I effective December 28, 1995.

The authority citation for part 135 is revised to read as follows:

Authority: 49 U.S.C. 106(g), 44113, 44701, 44702, 44705, 44709, 44711-44713, 44715-44717, 44722.

SUMMARY: This amendment adopts changes to certain references and language in the regulations governing the operations of certificate holders under parts 121 and 135. Many of these changes are made necessary as a result of the issuance of new part 119, which has made numerous references in parts 121 and 135 incorrect or obsolete. The changes to parts 121 and 135 in this amendment will not impose any additional restrictions on persons affected by these regulations.

FOR FURTHER INFORMATION CONTACT: Linda Williams, Office of Rulemaking (ARM-1); Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone (202) 267-9685.

SUPPLEMENTARY INFORMATION:

Background

On December 20, 1995, new part 119, Certification: Air Carriers and Commercial Operators, was published in the *Federal Register* (60 FR 65913; December 20, 1995). Part 119 reorganizes, into one part, certification and operations specifications requirements that formerly existed in SFAR 38-2 and in parts 121 and 135. The final rule for new part 119 also deleted or changed certain sections in part 121, subparts A-D, and part 135, subpart A, because most of the requirements in those subparts appear in part 119. This amendment makes editorial and terminology changes in the remaining subparts of parts 121 and 135 to conform those parts to the language of part 119 and to make certain other changes.

Part 119 was issued as part of a large rulemaking effort to upgrade the requirements that apply to scheduled operations conducted in airplanes that seat 10 to 30 passengers. These operations will in the future be conducted under the requirements of part 121, in accordance with the final rule published on December 20, 1995. The changes in this final rule are necessary as a result of the issuance of part 119, and as "house-keeping" items for commuter operations affected by the final rule published on December 20, 1995. These changes are consistent with the commuter rule.

Editorial Changes

The new part 119 and revisions to parts 121 and 135 require certain editorial changes. These changes are being made for clarity and consistency and to facilitate combining the certification requirements of parts 121 and 135 into new part 119. None of these changes impose any additional requirements on persons affected by the regulations.

The following are examples of changes being made in this final rule to the sections remaining in part 121 and part 135 in order to make these sections consistent with each other and with new part 119 and to reflect current FAA administrative procedures:

(1) References to "domestic, flag, or supplemental air carriers" have been changed to "domestic, flag, or supplemental operations," or "certificate holder conducting domestic, flag, or supplemental operations," as appropriate. Likewise, the term "commercial operator" has been changed to refer to the type of operation, such as "domestic operation," or to "certificate holder."

(2) References to an "ATCO Operating Certificate" have been changed to "Air Carrier Operating Certificate or Operating Certificate."

(3) References to "Flight Standards District Office" and "District Office" have been changed to "certificate-holding district office."

(4) Language changes have been made for consistency and to facilitate computer searches for certain terms; for example, "principal operations base" is changed to "principal base of operations."

(8) The definition of "scheduled operation" is corrected to the verbiage that appeared in the NPRM to eliminate a redundancy in the language.

(9) Although the preamble states that section 119.58 is removed, the final rule language contained that section. Therefore, section 119.58 is removed. Likewise, section 121.6 is removed for the same reason.

(10) In the preamble to the final rule, the FAA states that section 119.71, requirements for the Director of Maintenance, requires 3 years of experience within any amount of time; however the rule language for that section reads "3 years of experience within 3 years . . ." in both (e)(1) and (2). The FAA corrects the rule language to indicate this.

Age 60 Rule

In the final rule published at 60 FR 65832, the delayed pilot age limitation contained an error as to which pilots it applies. Section 121.2(i)(1) provides for delayed implementation of the Age 60 Rule (§ 121.383(c)) for certain pilots. Section 121.2(i)(2) defined those pilots as those employed by covered certificate holders "on or before March 20, 1997." The intent, however, was to include only those pilots employed on March 20, 1997. See, for instance, the discussion in the preamble at 60 FR 65843. Accordingly, the words "or before" are being deleted from the rule.

In addition, the FAA has received questions about the applicability of § 121.2(i) to pilots employed by certificate holders with "split certificates." An air carrier with a "split certificate" in this instance means an air carrier with authority to engage in both operations that have in the past been under part 121 (and will continue to be under part 121), and operations described in § 121.2(a)(1) (which have been under part 135 but will be under part 121 under the new rule). Some people have asked whether a pilot who is employed by a certificate holder with a "split certificate" on March 20, 1997, is under the delayed compliance described in § 121.2(i). The answer depends on the type of operations in which the pilot is employed on March 20, 1997. If the pilot is employed in operations described in § 121.2(a)(1) on that date, the pilot may serve as a pilot in such operations until December 20, 1999. If the pilot is not employed in such operations on March 20, 1997, the pilot may not serve in § 121.2(a)(1) operations after March 20, 1997. To clarify this, § 121.2(i)(2) is being amended to provide that the delayed compliance for the Age 60 Rule depends on the operations in which the pilot is employed on March 20, 1997. In addition, § 121.2(i)(1) is being amended to provide that a pilot who has reached the age of 60 may only be used in operations covered in § 121.2(a)(1).

There has been some confusion regarding the overall impact of the delayed compliance date for the Age 60 Rule. The following discussion should assist in understanding the rule.

The delayed compliance described in § 121.2(i) applies only to those operations described in § 121.2(a)(1), which identifies those commuter operations that were under part 135 and will transition to part 121 rules (that is, the "covered operations"). The application of the Age 60 Rule to certificate holders who have in the past been under part 121 is not affected.

On and before March 20, 1997, certificate holders may hire and use pilots in covered operations regardless of age.

Starting on March 21, 1997, and through December 19, 1999, a certificate holder may hire and use in covered operations only the following pilots:

- persons who have not reached age 60;
- persons who, on March 20, 1997, were employed by that certificate holder as pilots in covered operations, regardless of current age; and
- persons who, on March 20, 1997, were employed by another certificate holder as pilots in covered operations, regardless of current age.

the national government. Thus, in accordance with Executive Order 12612, it is determined that such a regulation does not have federalism implications warranting the preparation of a Federalism Assessment.

Paperwork Reduction Act

The information collection requirements associated with this rule have already been approved. There will be no increase or decrease in paperwork requirements as a result of these amendments, since the changes are completely editorial in nature.

Good Cause Justification for Immediate Adoption

This amendment is needed to conform parts 121 and 135 to the terminology of new part 119. In view of the need to expedite these changes, and because the amendment is editorial in nature and would impose no additional burden on the public, I find that notice and opportunity for public comment before adopting this amendment is unnecessary.

Conclusion

The FAA has determined that this regulation imposes no additional burden on any person. Accordingly, it has been determined that the action: (1) is not a significant rule under Executive Order 12866; and (2) is not a significant rule under Department of Transportation Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); Also, because this regulation is of editorial nature, no impact is expected to result and a full regulatory evaluation is not required. In addition, the FAA certifies that the rule will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

The Amendments

In consideration of the foregoing, the Federal Aviation Administration amends the Federal Aviation Regulations (14 CFR parts 119, 121 and 135) effective February 26, 1996.

The authority citation for part 135 continues to read as follows:

Authority: 49 U.S.C. 106(g), 44113, 44701, 44702, 44705, 44709, 44711-44713, 44715-44717, 44722.

| Effective date of required upgrade is as stated, measured from the rule publication date: Issue/Requirement | planes | | to all newly manufactured airplanes: after years (#) |
|---|------------------|------------------|--|
| | Within 15 months | Within years (#) | |
| 1. Passenger Seat Cushion Flammability, 10–19 Pax §§ 121.2, 121.312(c) | | 15 | |
| 2. Lavatory Fire Protection, 10–30 Pax §§ 121.2, 121.308 | | 2 | |
| 3. Exterior Emergency Exit Markings, 10–19 Pax § 121.310(g) | YES | | |
| 4. Pitot Heat Indication System, 10–19 Pax §§ 121.2, 121.342 | | 4 | |
| 5. Landing Gear Aural Warning, 10–19 Pax §§ 121.2, 121.289 | | 2 | |
| 6. Takeoff Warning System, 10–19 Pax §§ 121.2, 121.293 | | | 4 |
| 7. Emergency Exit Handle Illumination, 10–19 Pax §§ 121.2, 121.310(e)(2) | | 2 | |
| 8. First Aid Kits, 10–19 Pax § 121.309(d)(1)(i) | YES | | |
| 9. Emergency Medical Kits, 20–30 Pax § 121.309(d)(1)(ii) | YES | | |
| 10. Wing Ice Light, 10–19 Pax § 121.341(b) | YES | | |
| 11. Fasten Seat Belt Light and Placards, 10–19 Pax §§ 121.2, 121.317 | YES ¹ | | 2 ¹ |
| 12. Third Attitude Indicator, 10–30 Pax: Turbojet Turboprop §§ 121.2, 121.305(j) | YES ² | 15 ² | 15 months ² |
| 13. Airborne Weather Radar, 10–19 Pax § 121.357 | YES | | |
| 14. Protective Breathing Equipment, 10–30 Pax § 121.2 § 121.337(b)(8)—Smoke and fume protection § 121.337(b)(9)—Fire fighting (20–30 only) | | 2 | |
| 15. Safety Belts and Shoulder Harnesses, Single point inertial harness, 10–19 Pax §§ 121.2, 121.311(f) | | | 15 months |
| 16. Cabin Ozone Concentration, 10–30 Pax § 121.578 | YES | | |
| 17. Retention of Galley Equipment, 10–30 Pax §§ 121.576, 121.577 | YES | | |
| 18. Ditching approval, 10–30 Pax §§ 121.2, 121.161(b) | YES ³ | 15 ³ | |
| 19. Flotation means, 10–30 Pax §§ 121.2, 121.340 | | 2 | |
| 20. Door Key and Locking Door, 20–30 Pax § 121.313(f) & (g) | YES | | |
| 21. Portable O ₂ , 20–30 Pax §§ 121.327–121.335 | YES | | |
| 22. Additional life rafts, 10–30 Pax § 121.339 | YES | | |
| 23. First Aid Oxygen, 20–30 Pax § 121.333(e)(3) | YES | | |
| 24. Enroute radio communications, 10–30 Pax § 121.99 | YES | | |

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|--|------------------|-----------------|--|
| 26. Passenger information cards, 20–30 Pax § 121.571(b) | YES | | |
| 27. Flashlights—additional for flight attendant and pilot, 10–30 Pax § 121.549(b) | YES | | |
| 28. Flashlight holder for flight attendant, 20–30 Pax § 121.310(l) | YES | | |
| 29. DME, 10–30 Pax § 121.349(c) | YES | | |
| 30. Single engine cruise performance data, 10–30 Pax (required for determining alternates) § 121.617 | YES | | |
| 31. Performance, obstruction clearance, and accelerate-stop requirements, 10–19 Pax §§ 121.2, 121.157, 121.173(b), 121.189(c) | YES ⁴ | 15 ⁴ | |

¹ In-service airplanes must comply within 15 months. They may use lights or placards. Newly manufactured airplanes must comply with seat belt sign requirements of § 121.317(a) within 2 years.

² Turbojet airplanes must comply within 15 months. Newly manufactured turboprop airplanes must comply within 15 months. In-service 10–30 pax turboprop airplanes must comply within 15 years.

³ Transport category must comply within 15 months. Nontransport category can operate for 15 years without ditching approval.

⁴ Commuter category airplanes must comply within 15 months. SFAR 41 and predecessor category airplanes must comply within 15 years.

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|---|---------------------------|------------------------|
| Contents and personnel | 135.21, .23 | 121.133, .135, 121.137 |
| Airplane flight manual | | 121.141 |
| Subpart I—Airplane Performance Operating Limitations | 135.365–.387 | 121.175–.197 |
| Subpart J—Special Airworthiness Requirements | | 121.217 |
| —Internal doors | 135.87 | 121.285 |
| —Cargo carried in the passenger compartment | 135 APP A | 121.289 |
| —Landing gear aural warning device | | 121.291 |
| —Emergency evacuation and ditching demonstration | | |
| —New special airworthiness requirements (retrofit) and requirements applicable to future manufactured airplanes | | 121.293(a) (new) |
| —Ditching emergency exits | | 121.293(b) (new) |
| —Takeoff warning system | | |
| Subpart K—Instrument and Equipment Requirements: | | |
| —Third attitude indicator | | 121.305(j) |
| —Lavatory fire protection | 135.149, 135.163 (a), (h) | 121.308 |
| —Emergency equipment inspection | | 121.309(b) |
| —Hand-held fire extinguishers | 135.177(b) | 121.309(c) |
| —First aid kits and medical kits | 135.155 | 121.309(d) |
| —Crash ax | 135.177(a)(1) | 121.309(e) |
| —Emergency evacuation lighting and marking requirements | 135.177(a)(2) | 121.310(c)–(h) |
| —Seatbacks | 135.178(c)–(h) | |
| —Seatbelt and shoulder harnesses on the flight deck | 135.117 | 121.311(e) |
| —Interior materials and passenger seat cushion flammability | 135.169(a) | 121.311(f) |
| —Miscellaneous equipment | | 121.312(b) |
| —Cockpit and door keys | | 121.313 (c), (f), (g) |
| —Cargo and baggage compartments | | 121.313(f), 121.587 |
| —Fuel tank access covers | | 121.314, .221 |
| —Passenger information | | 121.316 |
| —Instruments and equipment for operations at night | 135.127 | 121.317 |
| —Oxygen requirements | | 121.323 |
| —Portable oxygen for flight attendants | 135.157 | 121.327–.335 |
| —Protective breathing equipment (PBE) | | 121.333(d) |
| —Additional life rafts for extended underwater operations | 135.167 | 121.337 |
| —Flotation devices | | 121.339 |
| —Pitot heat indication system | | 121.340 |
| —Radio equipment | 135.158 | 121.342 |
| —Emergency equipment for operations over uninhabited terrain | 135.161 | 121.345–.351 |
| —TCAS | 135.177, .178 | 121.353 |
| —Flight data recorders | 135.180 | 121.356 |
| —Airborne weather radar | 135.152(a), (b) | 121.343 |
| —Cockpit voice recorders | 135.173, .175 | 121.357 |
| —Low-altitude windshear systems | 135.151 | 121.359 |
| —Ground proximity warning system (GPWS) | 135.153 | 121.358 |
| Subpart L—Maintenance, Preventive Maintenance, and Alterations: | | |
| —Applicability | 135.411(a)(2) | 121.361 |
| —Responsibility for Airworthiness | 135.413 | 121.363 |

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| —Maintenance and preventative maintenance training programs | 135.433 | 121.375 |
| —Maintenance and preventive maintenance personnel duty time limitations | | 121.377 |
| —Certificate requirements | 135.435 | 121.378 |
| —Authority to perform and approve maintenance, preventive maintenance, and alterations | 135.437 | 121.379 |
| —Maintenance recording requirements | 135.439(a)(2) | 121.380(a)(2) |
| —Transfer of maintenance records | 135.441 | 121.380a |
| Subpart M—Airman and Crewmember Requirements: | | |
| —Flight attendant complement | 135.107 | 121.391 |
| —Flight attendants being seated during movement on the surface | 135.128(a) | 121.391(d) |
| —Flight attendants or other qualified personnel at the gate | | 121.391(e), 121.417, 121.393 (new) |
| Subparts N and O—Training Program and Crewmember Requirements | | 121.400–121.459 |
| Subpart P—Aircraft Dispatcher Qualifications and Duty Time Limitations: Domestic and Flag Air Carriers | | 121.461–121.467 |
| Subparts Q, R, and S—Flight Time Limitations and Rest Requirements: Domestic, Flag, and Supplemental Operations | 135.261–135.273 | 121.470–121.525 |
| Subpart T—Flight Operations: | | |
| —Operational control | 135.77, .79 | 121.533, .535, 121.537 |
| —Admission to the flight deck | 135.75 | 121.547 |
| —Emergency procedures | 135.69, .19 | 121.551, .553, 121.557, .559 121.565 (new) |
| —Passenger information | 135.117, .127 | 121.571(a), 121.533, .573, 121.585 |
| —Oxygen for medical use by passengers | 135.91(d) | 121.574 |
| —Alcoholic beverages | 135.121 | 121.575 |
| —Retention of items of mass | 135.87, .122 | 121.577 |
| —Cabin ozone concentration | | 121.578(b) |
| —Minimum altitudes for use of autopilot | 135.93 | 121.579 |
| —Forward observer's seat | 135.75 | 121.581 |
| —Authority to refuse transportation | 135.23(q) | 121.586 |
| —Carry-on baggage | 135.87 | 121.589 |
| —Airports | 135.229, .217 | 121.590, 121.617(a) |
| Subpart U—Dispatching and Flight Release Rules: | | |
| —Flight release authority | | 121.597 |
| —Dispatch or flight release under VFR | 135.211 | 121.611 |
| —Operations in icing conditions | 135.227, .341, 135.345 | 121.629 |
| —Fuel reserves | 135.209, .223 | 121.639, .641, 121.643, .645 |
| Subpart V—Records and Reports: | | |
| —Maintenance log: Airplane | 135.65(c), 135.415(a) | 121.701(a), 121.703(a), (e) |
| —Mechanical interruption summary report | 135.417 | 121.705(b) |
| —Alteration and repair reports | 135.439(a)(2) | 121.707 |
| —Airworthiness release or airplane log entry | 135.443 | 121.709 |
| —Other recordkeeping requirements | | 121.711, .713, 121.715 |

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| 119.5(a) | SFAR 38–2, Section 2(a). |
| 119.5(b) | SFAR 38–2, Section 2(b). |
| 119.5(c) | New language. |
| 119.5(d) | SFAR 38–2, Section 1(a)(3). |
| 119.5(e) | SFAR 38–2, Section 1(a)(3). |
| 119.5(f) | SFAR 38–2, Section 1(b). |
| 119.5(g) | SFAR 38–2, Section 1(c), 121.4, 135.7. |
| 119.5(h) | SFAR 38–2, Flush paragraph following Section 1(a)(3) and new language. |
| 119.5(i) | 121.27(a)(1), 121.51(a)(3), 135.13(a)(3). |
| 119.5(j) | 135.33. |
| 119.7(a) | SFAR 38–2, Section 3. |
| 119.7(b) | 121.23, 121.43. |
| 119.9(a) | 135.29. |
| 119.9(b) | New language. |
| Subpart B: | |
| 119.21(a) | SFAR 38–2, Section 4(a), 121.3. |
| 119.21(b) | SFAR 38–2, Section 4(b). |
| 119.21(c) | New language. |
| 119.23(a) | SFAR 38–2, Section 5(a). |
| 119.23(b) | SFAR 38–2, Section 5(b). |
| 119.25(a) | SFAR 38–2, Section 4(c), 5 (c), and (d) and new language. |
| 119.25(b) | SFAR 38–2, Section 4(c), 5 (c), and (d) and new language. |
| Subpart C: | |
| 119.31 | SFAR 38–2, Section 1(c), 2 (a) and (b), 121.3, and 135.5. |
| 119.33(a) | SFAR 38–2, Section 1(c), 2 (a) and (b), 3, 121.3, 135.5, 135.13(a). |
| 119.33(b) | SFAR 38–2, Section 1(c), 2 (a) and (b), 3, 121.3, 135.5, 135.13(a). |
| 119.33(c) | SFAR 38–2, Section 1(c), 2 (a) and (b), 3, 121.3, 135.5, 135.13(a). |
| 119.35(a) | 121.26, 121.47(a), 135.11(a). |
| 119.35(b) | 121.26, 121.47(a), 135.11(a). |
| 119.35(c) | 121.47(a). |
| 119.35(d) | 121.47(b). |
| 119.35(e) | 121.47(c). |
| 119.35(f) | 121.47(d). |
| 119.35(g) | 121.48. |
| 119.35(h) | 121.49. |
| 119.37(a) | 121.25(a), 121.45(a), 135.11(b)(1) and new language. |
| 119.37(b) | 121.25(a), 121.45(a), 135.11(b)(1) and new language. |
| 119.37(c) | 121.25(a), 121.45(a), 135.11(b)(1) and new language. |
| 119.37(d) | 121.25(a), 121.45(a), 135.11(b)(1) and new language. |
| 119.37(e) | 121.25(a), 121.45(a), 135.11(b)(1) and new language. |
| 119.39(a) | 121.27(a)(2), 121.51(a)(3), 135.11(b)(1). |
| 119.39(b) | 121.27(a)(2), 121.51, 135.13 (a)(2) and (b). |
| 119.41(a) | 121.77(a), 135.15(a). |
| 119.41(b) | New language. |
| 119.41(c) | 121.77(b), 135.15(b). |
| 119.41(d) | 121.77(c), 135.15(d). |
| 119.43(a) | 121.75(b), 135.63(a)(2). |
| 119.43(b) | 121.75(b), 135.63(a)(2). |
| 119.47(a) | 135.27(a). |
| 119.47(b) | 121.83, 135.27(b). |
| 119.49(a) | 121.5, 121.25(b), 121.45(b), 135.11(b), and new language. |
| 119.49(b) | 121.45(b), 135.11(b)(1) and new language. |
| 119.49(c) | 135.11(b)(1) and new language. |
| 119.49(d) | 121.75, 135.81. |
| 119.51(a) | 121.79(a), 135.17(a). |
| 119.51(b) | 121.79(b), 135.17(d). |
| 119.51(c) | 121.79(c), 135.17(b), and new language. |
| 119.51(d) | 121.79(d), 135.17 (c) and (d). |

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| 119.55(b) | 121.57 (a) and (b). |
| 119.55(c) | 121.57 (a) and (b). |
| 119.55(d) | 121.57 (a) and (b). |
| 119.55(e) | 121.57 (a) and (b). |
| 119.57(a) | 121.57(c). |
| 119.57(b) | New language. |
| 119.58(a) | 135.19(b). |
| 119.58(b) | 135.19(a). |
| 119.58(c) | 135.19(c). |
| 119.59(a) | 121.81(a), 135.73, and new language. |
| 119.59(b) | 121.73, 121.81(a), 135.63(a), 135.73, and new language. |
| 119.59(c) | 121.81(a). |
| 119.59(d) | New language. |
| 119.59(e) | New language. |
| 119.59(f) | New language. |
| 119.61(a) | 121.29(a), 121.53 (a), (c), and (d), 135.9(a). |
| 119.61(b) | 121.29(a), 121.53(c), and new language. |
| 119.61(c) | 135.35. |
| 119.63(a) | New language. |
| 119.63(b) | New language. |
| 119.65(a) | 121.59(a). |
| 119.65(b) | 121.59(b). |
| 119.65(c) | 121.59(b). |
| 119.65(d) | 121.61 and new language. |
| 119.65(e) | 121.59(c). |
| 119.67(a) | 121.61(a) and new language. |
| 119.67(b) | 121.61(b) and new language. |
| 119.67(c) | 121.61(c), 135.39(c) and new language. |
| 119.67(d) | 121.61(d) and new language. |
| 119.67(e) | 121.61(b), 135.39(d). |
| 119.69(a) | 135.37(a). |
| 119.69(b) | 121.59(b), 135.37(b). |
| 119.69(c) | 121.59(b) |
| 119.69(d) | 135.39 and new language. |
| 119.69(e) | 121.59, 135.37(c). |
| 119.71(a) | 135.39(a)(1) and new language. |
| 119.71(b) | 135.39(a)(2) and new language. |
| 119.71(c) | 135.39(b)(1) and new language. |
| 119.71(d) | 135.39(b)(2) and new language. |
| 119.71(e) | 135.39(c) and new language. |
| 119.71(f) | 135.39(d) and new language. |

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| 121.0(c) | 119.55(d). |
| 121.7 | 119.21. |
| 121.9 | deleted. |
| 121.13 | 119.25. |
| 121.21 | 119.1. |
| 121.23 | 119.7(b). |
| 121.25(a) | 119.37 (a), (b), (c), (d), (e), (f), and (g). |
| 121.25(b) | 119.49(a). |
| 121.26 | 119.35 (a) and (b). |
| 121.27(a)(1) | 119.5(i). |
| 121.27(a)(2) | 119.39 (a) and (b). |
| 121.29(a) | 119.61 (a) and (b). |
| 121.41 | 119.1. |
| 121.43 | 119.7(b). |
| 121.45(a) | 119.37 (a), (b), (c), (d), (e), (f), and (g). |
| 121.45(b) | 119.49 (a) and (b). |
| 121.47(a) | 119.35 (a), (b), and (c). |
| 121.47(b) | 119.35(d). |
| 121.47(c) | 119.35(e). |
| 121.47(d) | 119.35(f). |
| 121.48 | 119.35(g). |
| 121.49 | 119.35(h). |
| 121.51 | 119.39(b). |
| 121.51(a)(1) | 119.5(i). |
| 121.51(a)(3) | 119.39(a). |
| 121.53(a) | 119.61(a). |
| 121.53(c) | 119.61 (a) and (b). |
| 121.53(d) | 119.61(a). |
| 121.55 | deleted. |
| 121.57(a) | 119.55 (a), (b), (c), (d), and (e). |
| 121.57(b) | 119.55 (a), (b), (c), (d), and (e). |
| 121.57(c) | 119.57(a). |
| 121.59 | 119.69(e). |
| 121.59(a) | 119.65(a). |
| 121.59(b) | 119.65 (b) and (c); 119.69 (b) and (c). |
| 121.59(c) | 119.65(e). |
| 121.61 | 119.65(d). |
| 121.61(a) | 119.67(a). |
| 121.61(b) | 119.67 (b) and (e). |
| 121.61(c) | 119.67(c). |
| 121.61(d) | 119.67(d). |
| 121.71 | 119.1. |
| 121.73 | 119.59(b). |
| 121.75 | 119.49(d). |
| 121.75(b) | 119.43 (a) and (b). |
| 121.77(a) | 119.41(a). |
| 121.77(b) | 119.41(c). |
| 121.77(c) | 119.41(d). |
| 121.79(a) | 119.51(a). |
| 121.79(b) | 119.51 (b) and (e). |
| 121.79(c) | 119.51(c). |
| 121.79(d) | 119.51(d). |
| 121.81(a) | 119.59 (a), (b), and (c). |
| 121.83 | 119.47(b). |
| <i>Part 135:</i> | <i>Replaced by:</i> |
| 135.5 | 119.31; 119.33 (a), (b), and (c). |
| 135.7 | 119.5(g). |
| 135.9(a) | 119.61(a). |
| 135.11(a) | 119.35 (a) and (b). |

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| 135.15(a) | 119.41(a). |
| 135.15(b) | 119.41(b). |
| 135.15(d) | 119.41(d). |
| 135.17(a) | 119.51(a). |
| 135.17(b) | 119.51(c). |
| 135.17(c) | 119.51 (d) and (e). |
| 135.17(d) | 119.51 (b), (d), and (e). |
| 135.19 | 119.58. |
| 135.27(a) | 119.47(a). |
| 135.27(b) | 119.47(b). |
| 135.29 | 119.9(a). |
| 135.31 | 119.5. |
| 135.33 | 119.5(j). |
| 135.35 | 119.61(c). |
| 135.37(a) | 119.69(a). |
| 135.37(b) | 119.69(b). |
| 135.37(c) | 119.69(e). |
| 135.39 | 119.69(d). |
| 135.39(a)(1) | 119.71(a). |
| 135.39(a)(2) | 119.71(b). |
| 135.39(b)(1) | 119.71(c). |
| 135.39(b)(2) | 119.71(d). |
| 135.39(c) | 119.67(c); 199.71(e). |
| 135.39(d) | 119.67(e); 119.71(f). |
| 135.63(a) | 119.59(b). |
| 135.63(a)(2) | 119.43 (a) and (b). |
| 135.73 | 119.59(a) and (b). |
| 135.81 | 119.49(d). |
| <i>SFAR 38-2:</i> | <i>Replaced by:</i> |
| Section 1(a) | 119.1(b). |
| Section 1(a)(3) | 119.5 (d) and (e); 119.5(h). |
| Section 1(b) | 119.5(f). |
| Section 1(c) | 119.5(g); 119.31; 119.33 (a), (b), and (c). |
| Section 2(a) | 119.5(a); 119.31; 119.33 (a), (b), and (c). |
| Section 2(b) | 119.5(b); 119.31; 119.33 (a), (b), and (c). |
| Section 2(c) | 129.1. |
| Section 3 | 119.7(a); 119.33 (a), (b), and (c). |
| Section 4(a) | 119.21(a). |
| Section 4(b) | 119.21(b). |
| Section 4(c) | 119.25 (a) and (b). |
| Section 4(d) | 119.25 (a) and (b). |
| Section 5(a) | 119.23(a). |
| Section 5(b) | 119.23(b). |
| Section 5(c) | 119.25 (a) and (b). |
| Section 5(d) | 119.25 (a) and (b). |
| Section 6 | 119.3. |

(a) [This part prescribes rules governing—

[(1) The commuter or on-demand operations of each person who holds or is required to hold an Air Carrier Certificate or Operating Certificate under part 119 of this chapter.

[(2) Each person employed or used by a certificate holder conducting operations under this part including the maintenance, preventative maintenance and alteration of an aircraft.

[(3) The transportation of mail by aircraft conducted under a postal service contract awarded under 39 U.S.C. 5402c.

[(4) Each person who applies for provisional approval of an Advanced Qualification Program curriculum, curriculum segment, or portion of a curriculum segment under SFAR No. 58 of 14 CFR part 121 and each person employed or used by an air carrier or commercial operator under this part to perform training, qualification, or evaluation functions under an Advanced Qualification Program under SFAR No. 58 of 14 CFR part 121.

[(5) Nonstop sightseeing flights for compensation or hire that begin and end at the same airport, and are conducted within a 25 statute mile radius of that airport; however, except for operations subject to SFAR 50–2, these operations, when conducted for compensation or hire, must comply only with §§ 135.249, 135.251, 135.253, 135.255, and 135.353.

[(6) Each person who is on board an aircraft being operated under this part.

[(7) Each person who is an applicant for an Air Carrier Certificate or an Operating Certificate under 119 of this chapter, when conducting proving tests.]

(b) [Reserved]

(c) For the purpose of §§ 135.249, 135.251, 135.253, 135.255, and 135.353, *operator* means any person or entity conducting non-stop sightseeing flights for compensation or hire in an airplane or rotorcraft that begin and end at the same airport

of that airport.

(d) Notwithstanding the provisions of this part and appendices I and J to part 121 of this chapter, an operator who does not hold a part 121 or part 135 certificate is permitted to use a person who is otherwise authorized to perform aircraft maintenance or preventive maintenance duties and who is not subject to FAA-approved anti-drug and alcohol misuse prevention programs to perform—

(1) Aircraft maintenance or preventive maintenance on the operator's aircraft if the operator would otherwise be required to transport the aircraft more than 50 nautical miles further than the repair point closest to the operator's principal place of operation to obtain these services; or

(2) Emergency repairs on the operator's aircraft if the aircraft cannot be safely operated to a location where an employee subject to FAA-approved programs can perform the repairs.

(Amdt. 135–5, Eff. 7/1/80); (Amdt. 135–7, Eff. 2/1/81); (Amdt. 135–20, Eff. 1/6/87); (Amdt. 135–28, Eff. 12/21/88); (Amdt. 135–32, Eff. 8/18/90); (Amdt. 135–37, Eff. 10/1/90); (Amdt. 135–40, Eff. 10/5/91); (Amdt. 135–48, Eff. 3/17/94); [(Amdt. 135–58, Eff. 1/19/96)]

§ 135.2 [Compliance schedule for operators that transition to part 121 of this chapter; certain new entrant operators.]

[(a) *Applicability.* This section applies to the following:

(1) Each certificate holder that was issued an air carrier or operating certificate and operations specifications under the requirements of part 135 of this chapter or under SFAR No. 38–2 of 14 CFR part 121 before January 19, 1996, and that conducts scheduled passenger-carrying operations with:

(i) Nontransport category turbopropeller-powered airplanes type certificated after December 31, 1964, that have a passenger seat configuration of 10–19 seats;

to conduct scheduled passenger-carrying operations in the kinds of airplanes described in paragraphs (a)(1)(i), (a)(1)(ii), or paragraph (a)(1)(iii) of this section.

[(b) *Obtaining operations specifications.* A certificate holder described in paragraph (a)(1) of this section may not, after March 20, 1997, operate an airplane described in paragraphs (a)(1)(i), (a)(1)(ii), or (a)(1)(iii) of this section in scheduled passenger-carrying operations, unless it obtains operations specifications to conduct its scheduled operations under part 121 of this chapter on or before March 20, 1997.

[(c) *Regular or accelerated compliance.* Except as provided in paragraphs (d), (e), and (i) of this section, each certificate holder described in paragraphs (a)(1) of this section shall comply with each applicable requirement of part 121 of this chapter on and after March 20, 1997, or on and after the date on which the certificate holder is issued operations specifications under this part, whichever occurs first. Except as provided in paragraphs (d) and (e) of this section, each person described in paragraph (a)(2) of this section shall comply with each applicable requirement of part 121 of this chapter on and after the date on which that person is issued a certificate and operations specifications under part 121 of this chapter.

[(d) *Delayed compliance dates.* Unless paragraph (e) of this section specifies an earlier compliance date, no certificate holder that is covered by paragraph (a) of this section may operate an airplane in 14 CFR part 121 operations on or after a date listed in this paragraph unless that airplane meets the applicable requirement of this paragraph:

(1) *Nontransport category turbopropeller-powered airplanes type certificated after December 31, 1964, that have a passenger seating configuration of 10–19 seats.* No certificate holder may operate under this part an airplane that is described in paragraph (a)(1)(i) of this section on or after a date listed in paragraph (i), (ii), and (iii) unless that airplane meets the applicable requirement listed in paragraph (i), (ii), and (iii):

(i) December 20, 1997:

means.

(ii) December 20, 1999: Section 121.342, Pitot heat indication system.

(iii) December 20, 2010:

(A) For airplanes described in § 121.157(f), the Airplane Performance Operating Limitations in §§ 121.189 through 121.197.

(B) Section 121.161(b), Ditching approval.

(C) Section 121.305(j), Third attitude indicator.

(D) Section 121.312(c), Passenger seat cushion flammability.

(2) *Transport category turbopropeller-powered airplanes that have a passenger seat configuration of 20–30 seats.* No certificate holder may operate under this part an airplane that is described in paragraph (a)(1)(ii) of this section on or after a date listed in this subparagraph unless that airplane meets the applicable requirement listed in this subparagraph:

(i) December 20, 1997:

(A) Section 121.308, Lavatory fire protection.

(B) Section 121.337(b)(8) and (9), Protective breathing equipment.

(C) Section 121.340, Emergency flotation means.

(ii) December 20, 2010: Section 121.305(j), Third attitude indicator.

[(e) *Newly manufactured airplanes.* No certificate holder that is described in paragraph (a) of this section may operate under part 121 of this chapter an airplane manufactured on or after a date listed in this paragraph unless that airplane meets the applicable requirement listed in this paragraph.

(1) For nontransport category turbopropeller-powered airplanes type certificated after December 31, 1964, that have a passenger seat configuration of 10–19 seats:

(i) Manufactured on or after March 20, 1997:

(A) Section 121.305(j), Third attitude indicator.

ered airplanes that have a passenger seat configuration of 20–30 seats manufactured on or after March 20, 1997: Section 121.305(j), Third attitude indicator.

[(f) *New type certification requirements.* No person may operate an airplane for which the application for a type certificate was filed after March 29, 1995, in 14 CFR part 121 operations unless that airplane is type certificated under part 25 of this chapter.

[(g) *Transition plan.* Before March 19, 1996, each certificate holder described in paragraph (a)(1) of this section must submit to the FAA a transition plan (containing a calendar of events) for moving from conducting its scheduled operations under the commuter requirements of part 135 of this chapter to the requirements for domestic or flag operations under part 121 of this chapter. Each transition plan must contain details on the following:

- (1) Plans for obtaining new operations specifications authorizing domestic or flag operations;
- (2) Plans for being in compliance with the applicable requirements of part 121 of this chapter on or before March 20, 1997; and
- (3) Plans for complying with the compliance date schedules contained in paragraphs (d) and (e) of this section.

[(h) *Continuing requirements.* Until each certificate holder that is covered by paragraph (a) of this section meets the specific compliance dates listed in paragraphs (d) and (e) of this section, the certificate holder shall comply with the applicable airplane and equipment requirements of part 135 of this chapter.

[(i) *Delayed pilot age limitation.*

(1) Notwithstanding § 121.383(c) of this chapter, and except as provided in paragraph (i)(2) of this section, a certificate holder covered by paragraph (a)(1) of this section may use the services of a person as a pilot after that person has reached his or her 60th birthday, until December 20, 1999. Notwithstanding § 121.383(c) of this chapter, and except as provided in paragraph (i)(2) of this section, a person may serve as a pilot for a certificate holder covered by paragraph

§ 135.3 Rules applicable to operations subject to this part.

(a) [Each person operating an aircraft in operations under this part shall—

(1) [While operating inside the United States, comply with the applicable rules of this chapter; and

(2) [While operating outside the United States, comply with Annex 2, Rules of the Air, to the Convention on International Civil Aviation or the regulations of any foreign country, whichever applies, and with any rules of parts 61 and 91 of this chapter and this part that are more restrictive than that Annex or those regulations and that can be complied with without violating that Annex or those regulations. Annex 2 is incorporated by reference in § 91.703(b) of this chapter.

(b) [After March 19, 1997, each certificate holder that conducts commuter operations under this part with airplanes in which two pilots are required by the type certification rules of this chapter, or with airplanes having a passenger seating configuration, excluding any pilot seat, of 10 seats or more, shall comply with subparts N and O of part 121 instead of the requirements of subparts E, G, and H of this part. Each affected certificate holder must submit to the Administrator and obtain approval of a transition plan (containing a calendar of events) for moving from its present part 135 training, checking, testing, and qualification requirements to the requirements of part 121 of this chapter. Each transition plan must be submitted by March 19, 1996, and must contain details on how the certificate holder plans to be in compliance with subparts N and O of part 121 on or before March 19, 1997.

[(c) If authorized by the Administrator upon application, each certificate holder that conducts operations under this part to which paragraph (b) of this section does not apply, may comply with the applicable sections of subparts N and O of part 121 instead of the requirements of subparts E, G, and H of this part, except that those authorized certificate holders may choose to comply with

§ 135.7 Applicability of rules to unauthorized operators.

The rules in this part which apply to a person certificated under [part 119 of this chapter] also apply to a person who engages in any operation governed by this part without an appropriate certificate and operations specifications required by [part 119 of this chapter].

[(Amdt. 135-58, Eff. 1/19/96)]

§ 135.9 [Removed]

[(Amdt. 135-58, Eff. 1/19/96)]

§ 135.10 [Removed]

Docket No. 19110 (53 FR 37697) Eff. 9/27/88; (Amdt 135-1, Eff. 5/7/79) (Amdt. 135-6, Eff. 9/10/80); (Amdt. 135-9, Eff. 12/1/80) (Amdt. 135-13, Eff. 5/19/81); (Amdt. 135-27, Eff. 1/2/89); [(Amdt. 135-60, Eff. 2/26/96)]

§ 135.11 [Removed]

(Amdt. 135-24, Eff. 8/25/87); [(Amdt. 135-58, Eff. 1/19/96)]

[§ 135.12 Previously trained crewmembers.

[A certificate holder may use a crewmember who received the certificate holder's training in accordance with subparts E, G, and H of this part before March 19, 1997, without complying with initial training and qualification requirements of subparts N and O of part 121 of this chapter. The crewmember must comply with the applicable recurrent training requirements of part 121 of this chapter.]

[(Amdt. 135-57, Eff. 3/19/96)]

§ 135.13 [Removed]

[(Amdt. 135-58, Eff. 1/19/96)]

§ 135.15 [Removed]

[(Amdt. 135-58, Eff. 1/19/96)]

equipment and weather minimums to the extent required to meet that emergency.

(b) In an emergency involving the safety of persons or property, the pilot-in-command may deviate from the rules of this part to the extent required to meet that emergency.

(c) Each person who, under the authority of this section, deviates from a rule of this part shall, within 10 days, excluding Saturdays, Sundays, and Federal holidays, after the deviation, send to the FAA Flight Standards District Office charged with the overall inspection of the certificate holder a complete report of the aircraft operation involved, including a description of the deviation and reasons for it.

§ 135.21 Manual requirements.

(a) Each certificate holder, other than one who uses only one pilot in the certificate holder's operations, shall prepare and keep current a manual setting forth the certificate holder's procedures and policies acceptable to the Administrator. This manual must be used by the certificate holder's flight, ground, and maintenance personnel in conducting its operations. However, the Administrator may authorize a deviation from this paragraph if the Administrator finds that, because of the limited size of the operation, all or part of the manual is not necessary for guidance of flight, ground, or maintenance personnel.

(b) Each certificate holder shall maintain at least one copy of the manual at its [principal base of operations].

(c) The manual must not be contrary to any applicable Federal regulations, foreign regulation applicable to the certificate holder's operations in foreign countries, or the certificate holder's operating certificate or operations specifications.

(d) A copy of the manual, or appropriate portions of the manual (and changes and additions) shall be made available to maintenance and ground operations personnel by the certificate holder and furnished to—

(1) Its flight crewmembers; and

private parts of the manual on each aircraft when away from the [principal base of operations]. The appropriate parts must be available for use by ground or flight personnel.

(g) If a certificate holder conducts aircraft inspections or maintenance at specified stations where it keeps the approved inspection program manual, it is not required to carry the manual aboard the aircraft en route to those stations.

(Amdt. 135-18, Eff. 8/2/82); [(Amdt. 135-58, Eff. 1/19/96)]

§ 135.23 Manual contents.

Each manual shall have the date of the last revision on each revised page. The manual must include—

(a) The name of each management person required under [§ 119.69(a) of this chapter] who is authorized to act for the certificate holder, the person's assigned area of responsibility, the person's duties, responsibilities, and authority, and the name and title of each person authorized to exercise operational control under § 135.77;

(b) Procedures for ensuring compliance with aircraft weight and balance limitations and, for multi-engine aircraft, for determining compliance with § 135.185;

(c) Copies of the certificate holder's operations specifications or appropriate extracted information, including area of operations authorized, category and class of aircraft authorized, crew complements, and types of operations authorized;

(d) Procedures for complying with accident notification requirements.

(e) Procedures for ensuring that the pilot-in-command knows that required airworthiness inspections have been made and that the aircraft has been approved for return to service in compliance with applicable maintenance requirements;

(f) Procedures for reporting and recording mechanical irregularities that come to the attention of the pilot-in-command before, during, and after completion of a flight;

(g) Procedures to be followed by the pilot-in-command for determining that mechanical irregular-

for, or continuation of, flight if any item of equipment required for the particular type of operation becomes inoperative or unserviceable en route;

(j) Procedures for refueling aircraft, eliminating fuel contamination, protecting from fire (including electrostatic protection), and supervising and protecting passengers during refueling;

(k) Procedures to be followed by the pilot-in-command in the briefing under § 135.117;

(l) Flight locating procedures, when applicable;

(m) Procedures for ensuring compliance with emergency procedures, including a list of the functions assigned each category of required crewmembers in connection with an emergency and emergency evacuation duties under § 135.123;

(n) En route qualification procedures for pilots, when applicable;

(o) The approved aircraft inspection program, when applicable;

(p) Procedures and instructions to enable personnel to recognize hazardous materials, as defined in Title 49 CFR, and if these materials are to be carried, stored, or handled, procedures and instructions for—

(1) Accepting shipment of hazardous material required by Title 49 CFR, to assure proper packaging, marking, labeling, shipping documents, compatibility of articles, and instructions on their loading, storage, and handling;

(2) Notification and reporting hazardous material incidents as required by Title 49 CFR; and

(3) Notification of the pilot-in-command when there are hazardous materials aboard, as required by Title 49 CFR;

(q) Procedures for the evacuation of persons who may need the assistance of another person to move expeditiously to an exit if an emergency occurs; and

(r) Other procedures and policy instructions regarding the certificate holder's operations, that are issued by the certificate holder.

(Amdt. 135-20, Eff. 1/6/87); [(Amdt. 135-58, Eff. 1/19/96)]

the applicable airworthiness requirements of this chapter, including those relating to identification and equipment.

(b) Each certificate holder must have the exclusive use of at least one aircraft that meets the requirements for at least one kind of operation authorized in the certificate holder's operations specifications. In addition, for each kind of operation for which the certificate holder does not have the exclusive use of an aircraft, the certificate holder must have available for use under a written agreement (including arrangements for performing required maintenance) at least one aircraft that meets the requirements for that kind of operation. However, this paragraph does not prohibit the operator from using or authorizing the use of the aircraft for other than air taxi or commercial operations and does not require the certificate holder to have exclusive use of all aircraft that the certificate holder uses.

(c) For the purposes of paragraph (b) of this section, a person has exclusive use of an aircraft if that person has the sole possession, control, and use of it for flight, as owner, or has a written agreement (including arrangements for performing required maintenance), in effect when the aircraft is operated, giving the person that possession, control, and use for at least 6 consecutive months.

(d) A certificate holder may operate in common carriage, and for the carriage of mail, a civil aircraft which is leased or chartered to it without crew and is registered in a country which is a party to the Convention on International Civil Aviation if—

(1) The aircraft carries an appropriate airworthiness certificate issued by the country of registration and meets the registration and identification requirements of that country;

(2) The aircraft is of a type design which is approved under a U.S. type certificate and complies with all of the requirements of this chapter (14 CFR Chapter 1) that would be applicable to that aircraft were it registered in the United States, including the requirements which must be met for issuance of a U.S. stand-

(4) The certificate holder files a copy of the aircraft lease or charter agreement with the FAA Aircraft Registry, Department of Transportation, 6400 South MacArthur Boulevard, Oklahoma City, OK (Mailing address: P.O. Box 25504, Oklahoma City, OK 73125).

(Amdt. 135-8, Eff. 10/16/80)

§ 135.27 [Removed]

[(Amdt. 135-58, Eff. 1/19/96)]

§ 135.29 [Removed]

[(Amdt. 135-58, Eff. 1/19/96)]

§ 135.31 [Removed]

[(Amdt. 135-58, Eff. 1/19/96)]

§ 135.33 [Removed]

[(Amdt. 135-58, Eff. 1/19/96)]

§ 135.35 [Removed]

[(Amdt. 135-58, Eff. 1/19/96)]

§ 135.37 [Removed]

(Amdt 135-18, Eff. 8/2/82); [(Amdt. 135-58, Eff. 1/19/96)]

§ 135.39 [Removed]

(Amdt 135-6, Eff. 9/10/80); (Amdt. 135-18, Eff. 8/2/82); (Amdt 135-20, Eff. 1/6/87); (Amdt. 135-33, Eff. 10/25/89); [(Amdt. 135-58, Eff. 1/19/96)]

§ 135.41 Carriage of narcotic drugs, marijuana, and depressant or stimulant drugs or substances.

[If the holder of a certificate operating under this part allows any aircraft owned or leased by that holder to be engaged in any operation that the certificate holder knows to be in violation of

(2) The certificate holder shall surrender the certificate to United States citizens who are employed by certificate holders as crewmembers on United States registered aircraft engaged in international air commerce. The purpose of the certificate is to facilitate the entry and clearance of those crewmembers into ICAO contracting states. They are issued under Annex 9, as amended, to the Convention on International Civil Aviation.

holder is employed, shall surrender the certificate for cancellation at the nearest [certificate-holding district office] or submit it for cancellation to the Airmen Certification Branch (AAC-260), P.O. Box 25082, Oklahoma City, OK 73125, at the termination of the holder's employment with that certificate holder.

[(Amdt. 135-58, Eff. 1/19/96)]

under this part.

§ 135.63 Recordkeeping requirements.

(a) Each certificate holder shall keep at its principal business office or at other places approved by the Administrator, and shall make available for inspection by the Administrator the following—

(1) The certificate holder's operating certificate;

(2) The certificate holder's operations specifications;

(3) [A current list of the aircraft used or available for use in operations under this part and the operations for which each is equipped;]

(4) An individual record of each pilot used in operations under this part, including the following information:

(i) The full name of the pilot.

(ii) The pilot certificate (by type and number) and ratings that the pilot holds.

(iii) The pilot's aeronautical experience in sufficient detail to determine the pilot's qualifications to pilot aircraft in operation under this part.

(iv) The pilot's current duties and the date of the pilot's assignment to those duties.

(v) The effective date and class of the medical certificate that the pilot holds.

(vi) The date and result of each of the initial and recurrent competency tests and proficiency and route checks required by this part and the type of aircraft flown during that test or check.

(vii) The pilot's flight time in sufficient detail to determine compliance with the flight time limitations of this part.

(viii) The pilot's check pilot authorization, if any.

(ix) Any reaction taken concerning the pilot's release from employment for physical or professional disqualification.

[(5) An individual record for each flight attendant who is required under this part, maintained in sufficient detail to determine compliance with the applicable portions of § 135.273 of this part.]

(b) [Each certificate holder must keep each record required by paragraph (a)(3) of this section for at least 6 months, and must keep each record required by paragraphs (a)(4) and (a)(5) of this section for at least 12 months.]

(c) For multiengine aircraft, each certificate holder is responsible for the preparation and accuracy of a load manifest in duplicate containing information concerning the loading of the aircraft. The manifest must be prepared before each takeoff and must include—

(1) The number of passengers;

(2) The total weight of the loaded aircraft;

(3) The maximum allowable takeoff weight for that flight;

(4) The center of gravity limits;

(5) The center of gravity of the loaded aircraft, except that the actual center of gravity need not be computed if the aircraft is loaded according to a loading schedule or other approved method that ensures that the center of gravity of the loaded aircraft is within approved limits. In those cases, an entry shall be made on the manifest indicating that the center of gravity is within limits according to a loading schedule or other approved method;

(6) The registration number of the aircraft or flight number;

(7) The origin and destination; and

(8) Identification of crewmembers and their crew position assignments.

(d) The pilot-in-command of the aircraft for which a load manifest must be prepared shall carry a copy of the completed load manifest in the aircraft to its destination. The certificate holder shall keep copies of completed load manifest for at least 30 days at its principal operations base, or at

[(a) Each commercial operator who conducts intrastate operations for compensation or hire shall keep a copy of each written contract under which it provides services as a commercial operator for a period of at least one year after the date of execution of the contract. In the case of an oral contract, it shall keep a memorandum stating its elements, and of any amendments to it, for a period of at least one year after the execution of that contract or change.]

[(b) Each commercial operator who conducts intrastate operations for compensation or hire shall submit a financial report for the first 6 months of each fiscal year and another financial report for each complete fiscal year. If that person's operating certificate is suspended for more than 29 days, that person shall submit a financial report as of the last day of the month in which the suspension is terminated. The report required to be submitted by this section shall be submitted within 60 days of the last day of the period covered by the report and must include—

(1) A balance sheet that shows assets, liabilities, and net worth on the last day of the reporting period;

(2) The information required by § 119.35 (h)(2), (h)(7), and (h)(8) of this chapter;

(3) An itemization of claims in litigation against the applicant, if any, as of the last day of the period covered by the report;

(4) A profit and loss statement with the separation of items relating to the applicant's commercial operator activities from his other business activities, if any; and

(5) A list of each contract that gave rise to operating income on the profit and loss statement, including the names and addresses of the contracting parties and the nature, scope, date, and duration of each contract.]

[(Amdt. 135-58, Eff. 1/19/96)]

§ 135.65 Reporting mechanical irregularities.

(a) Each certificate holder shall provide an aircraft maintenance log to be carried on board each

preceding flight.

(c) Each person who takes corrective action or defers action concerning a reported or observed failure or malfunction of an airframe, powerplant, propeller, rotor, or appliance, shall record the action taken in the aircraft maintenance log under the applicable maintenance requirements of this chapter.

(d) Each certificate holder shall establish a procedure for keeping copies of the aircraft maintenance log required by this section in the aircraft for access by appropriate personnel and shall include that procedure in the manual required by § 135.21.

§ 135.67 Reporting potentially hazardous meteorological conditions and irregularities of communications or navigation facilities.

Whenever a pilot encounters a potentially hazardous meteorological condition or an irregularity in a ground communications or navigational facility in flight, the knowledge of which the pilot considers essential to the safety of other flights, the pilot shall notify an appropriate ground radio station as soon as practicable.

(Amdt. 135-1, Eff. 5/7/79)

§ 135.69 Restriction or suspension of operations: Continuation of flight in an emergency.

(a) During operations under this part, if a certificate holder or pilot-in-command knows of conditions, including airport and runway conditions, that are a hazard to safe operations, the certificate holder or pilot-in-command, as the case may be, shall restrict or suspend operations as necessary until those conditions are corrected.

(b) No pilot-in-command may allow a flight to continue toward any airport of intended landing under the conditions set forth in paragraph (a) of this section, unless in the opinion of the pilot-in-command, the conditions that are a hazard to safe operations may reasonably be expected to be corrected by the estimated time of arrival or, unless there is no safer procedure. In the latter event,

made.
(Amdt. 135-32, Eff. 8/18/90)

§ 135.73 Inspections and tests.

Each certificate holder and each person employed by the certificate holder shall allow the Administrator, at any time or place, to make inspections or tests (including en route inspections) to determine the holder's compliance with the Federal Aviation Act of 1958, applicable regulations, and the certificate holder's operating certificate, and operations specifications.

§ 135.75 Inspectors credentials: Admission to pilots' compartment: Forward observer's seat.

(a) Whenever, in performing the duties of conducting an inspection, an FAA inspector presents an Aviation Safety Inspector credential, FAA Form 110A, to the pilot-in-command of an aircraft operated by the certificate holder, the inspector must be given free and uninterrupted access to the pilot compartment of that aircraft. However, this paragraph does not limit the emergency authority of the pilot-in-command to exclude any person from the pilot compartment in the interest of safety.

(b) A forward observer's seat on the flight deck, or forward passenger seat with headset or speaker must be provided for use by the Administrator while conducting en route inspections. The suitability of the location of the seat and the headset or speaker for use in conducting en route inspections is determined by the Administrator.

§ 135.77 Responsibility for operational control.

Each certificate holder is responsible for operational control and shall list, in the manual required by § 135.21, the name and title of each person authorized by it to exercise operational control.

is overdue or missing; and

(3) Provide the certificate holder with the location, date, and estimated time for reestablishing radio or telephone communications, if the flight will operate in an area where communications cannot be maintained.

(b) Flight locating information shall be retained at the certificate holder's principal place of business, or at other places designated by the certificate holder in the flight locating procedures, until the completion of the flight.

(c) Each certificate holder shall furnish the representative of the Administrator assigned to it with a copy of its flight locating procedures and any changes or additions, unless those procedures are included in a manual required under this part.

§ 135.81 Informing personnel of operational information and appropriate changes.

Each certificate holder shall inform each person in its employment of the operations specifications that apply to that person's duties and responsibilities and shall make available to each pilot in the certificate holder's employ the following materials in current form:

(a) Airman's Information Manual (Alaska Supplement in Alaska and Pacific Chart Supplement in Pacific-Asia Regions) or a commercial publication that contains the same information.

(b) This part and part 91 of this chapter.

(c) Aircraft Equipment Manuals, and Aircraft Flight Manual or equivalent.

(d) For foreign operations, the International Flight Information Manual or a commercial publication that contains the same information concerning the pertinent operational and entry requirements of the foreign country or countries involved.

§ 135.83 Operating information required.

(a) The operator of an aircraft must provide the following materials, in current and appropriate form,

tional en route, terminal area, and approach and letdown chart.

(5) For multiengine aircraft, one-engine-inoperative climb performance data and if the aircraft is approved for use in IFR or over-the-top operations, that data must be sufficient to enable the pilot to determine compliance with § 135.181(a)(2).

(b) Each cockpit checklist required by paragraph (a)(1) of this section must contain the following procedures:

- (1) Before starting engines;
- (2) Before takeoff;
- (3) Cruise;
- (4) Before landing;
- (5) After landing;
- (6) Stopping engines.

(c) Each emergency cockpit checklist required by paragraph (a)(2) of this section must contain the following procedures as appropriate:

- (1) Emergency operation of fuel, hydraulic, electrical, and mechanical systems.
- (2) Emergency operation of instruments and controls.
- (3) Engine inoperative procedures.
- (4) Any other emergency procedures necessary for safety.

§ 135.85 Carriage of persons without compliance with the passenger-carrying provisions of this part.

The following persons may be carried aboard an aircraft without complying with the passenger-carrying requirements of this part:

- (a) A crewmember or other employee of the certificate holder.
- (b) A person necessary for the safe handling of animals on the aircraft.
- (c) A person necessary for the safe handling of hazardous materials (as defined in Subchapter C of Title 49 CFR).
- (d) A person performing duty as a security or honor guard accompanying a shipment made by or under the authority of the U.S. Government.

operation of the certificate holder.

§ 135.87 Carriage of cargo including carry-on baggage.

No person may carry cargo, including carry-on baggage, in or on any aircraft unless—

- (a) It is carried in an approved cargo rack, bin, or compartment installed in or on the aircraft;
- (b) It is secured by an approved means; or
- (c) It is carried in accordance with each of the following:

(1) For cargo, it is properly secured by a safety belt or other tie-down having enough strength to eliminate the possibility of shifting under all normally anticipated flight and ground conditions, or for carry-on baggage, it is restrained so as to prevent its movement during air turbulence.

(2) It is packaged or covered to avoid possible injury to occupants.

(3) It does not impose any load on seats or on the floor structure that exceeds the load limitation for those components.

(4) It is not located in a position that obstructs the access to, or use of, any required emergency or regular exit, or the use of the aisle between the crew and the passenger compartment, or located in a position that obscures any passenger's view of the "seat belt" sign, "no smoking" sign, or any required exit sign, unless an auxiliary sign or other approved means for proper notification of the passengers is provided.

(5) It is not carried directly above seated occupants.

(6) It is stowed in compliance with this section for takeoff and landing.

(7) For cargo only operations, paragraph (c)(4) of this section does not apply if the cargo is loaded so that at least one emergency or regular exit is available to provide all occupants of the aircraft a means of unobstructed exit from the aircraft if an emergency occurs.

(d) Each passenger seat under which baggage is stowed shall be fitted with a means to prevent articles of baggage stowed under it from sliding under crash impacts severe enough to induce the

of the compartment with the contents of a hand fire extinguisher

§ 135.89 Pilot requirements: Use of oxygen.

(a) *Unpressurized aircraft.* Each pilot of an unpressurized aircraft shall use oxygen continuously when flying

(1) At altitudes above 10,000 feet through 12,000 feet MSL for that part of the flight at those altitudes that is of more than 30 minutes duration; and

(2) Above 12,000 feet MSL.

(b) *Pressurized aircraft.*

(1) Whenever a pressurized aircraft is operated with the cabin pressure altitude more than 10,000 feet MSL, each pilot shall comply with paragraph (a) of this section.

(2) Whenever a pressurized aircraft is operated at altitudes above 25,000 feet through 35,000 feet MSL unless each pilot has an approved quick-donning type oxygen mask—

(i) At least one pilot at the controls shall wear, secured and sealed, an oxygen mask that either supplies oxygen at all times or automatically supplies oxygen whenever the cabin pressure altitude exceeds 12,000 feet MSL; and

(ii) During that flight, each other pilot on flight deck duty shall have an oxygen mask, connected to an oxygen supply, located so as to allow immediate placing of the mask on the pilot's face sealed and secured for use.

(3) Whenever a pressurized aircraft is operated at altitudes above 35,000 feet MSL, at least one pilot at the controls shall wear, secured and sealed, an oxygen mask required by paragraph (2)(i) of this paragraph.

(4) If one pilot leaves a pilot duty station of an aircraft when operating at altitudes above 25,000 feet MSL, the remaining pilot at the controls shall put on and use an approved oxygen mask until the other pilot returns to the pilot duty station of the aircraft.

damage during that carriage or operation and unless the following conditions are met—

(1) The equipment must be—

(i) Of an approved type or in conformity with the manufacturing, packaging, marking, labeling and maintenance requirements of Title 49 CFR parts 171, 172, and 173, except § 173.24(a)(1);

(ii) When owned by the certificate holder, maintained under the certificate holder's approved maintenance program;

(iii) Free of flammable contaminants on all exterior surfaces; and

(iv) Appropriately secured.

(2) When the oxygen is stored in the form of a liquid, the equipment must have been under the certificate holder's approved maintenance program since its purchase new or since the storage container was last purged.

(3) When the oxygen is stored in the form of a compressed gas as defined in Title 49 CFR § 173.300(a)—

(i) When owned by the certificate holder, it must be maintained under its approved maintenance program; and

(ii) The pressure in any oxygen cylinder must not exceed the rated cylinder pressure.

(4) The pilot-in-command must be advised when the equipment is on board, and when it is intended to be used.

(5) The equipment must be stowed, and each person using the equipment must be seated, so as not to restrict access to or use of any required emergency or regular exit, or of the aisle in the passenger compartment.

(b) No person may smoke and no certificate holder may allow any person to smoke within 10 feet of oxygen storage and dispensing equipment carried under paragraph (a) of this section.

(c) No certificate holder may allow any person other than a person trained in the use of medical oxygen equipment to connect or disconnect oxygen bottles or any other ancillary component while any passenger is aboard the aircraft.

(e) Each certificate holder who, under the authority of paragraph (d) of this section, deviates from paragraph (a)(1)(i) of this section under a medical emergency shall, within 10 days, excluding Saturdays, Sundays, and Federal holidays, after the deviation, send to the [certificate-holding district office] a complete report of the operation involved, including a description of the deviation and the reasons for it.

[(Amdt. 135-60, Eff. 2/26/96)]

§ 135.93 Autopilot: Minimum altitudes for use.

(a) Except as provided in paragraphs (b), (c), and (d) of this section, no person may use an autopilot at an altitude above the terrain which is less than 500 feet or less than twice the maximum altitude loss specified in the approved Aircraft Flight Manual or equivalent for a malfunction of the autopilot, whichever is higher.

(b) When using an instrument approach facility other than ILS, no person may use an autopilot at an altitude above the terrain that is less than 50 feet below the approved minimum descent altitude for that procedure, or less than twice the maximum loss specified in the approved Airplane Flight Manual or equivalent for a malfunction of the autopilot under approach conditions, whichever is higher.

(c) For ILS approaches, when reported weather conditions are less than the basic weather conditions in § 91.155 of this chapter, no person may use an autopilot with an approach coupler at an altitude above the terrain that is less than 50 feet above the terrain, or the maximum altitude loss specified in the approved Airplane Flight Manual or equivalent for the malfunction of the autopilot with approach coupler, whichever is higher.

(d) Without regard to paragraph (a), (b), or (c) of this section, the Administrator may issue operations specifications to allow the use, to touchdown, of an approved flight control guidance system with automatic capability, if—

(1) The system does not contain any altitude loss (above zero) specified in the approved Air-

§ 135.95 Airmen: Limitations on use of services.

No certificate holder may use the services of any person as a airman unless the person performing those services—

(a) Holds an appropriate and current airman certificate; and

(b) Is qualified, under this chapter, for the operation for which the person is to be used.

§ 135.97 Aircraft and facilities for recent flight experience.

Each certificate holder shall provide aircraft and facilities to enable each of its pilots to maintain and demonstrate the pilot's ability to conduct all operations for which the pilot is authorized.

§ 135.99 Composition of flight crew.

(a) No certificate holder may operate an aircraft with less than the minimum flight crew specified in the aircraft operating limitations or the Aircraft Flight Manual for that aircraft and required by this part for the kind of operation being conducted.

(b) No certificate holder may operate an aircraft without a second-in-command if that aircraft has a passenger seating configuration, excluding any pilot seat, of ten seats or more.

§ 135.100 Flight crewmember duties.

(a) No certificate holder shall require, nor may any flight crewmember perform, any duties during a critical phase of flight except those duties required for the safe operation of the aircraft. Duties such as company required calls made for such nonsafety related purposes as ordering galley supplies and confirming passenger connections, announcements made to passengers promoting the air carrier or pointing out sights of interest, and filling out company payroll and related records are not required for the safe operation of the aircraft.

(b) No flight crewmember may engage in, nor may any pilot-in-command permit, any activity dur-

the safe operation of the aircraft.

(c) For the purposes of this section, critical phases of flight includes all ground operations involving taxi, takeoff and landing, and all other flight operations conducted below 10,000 feet, except cruise flight.

NOTE: Taxi is defined as "movement of an airplane under its own power on the surface of an airport."

(Amdt. 135-11, Eff. 5/18/81); (Amdt. 135-14, Eff. 6/18/81); (Amdt. 135-15, Eff. 6/11/81)

§ 135.101 Second-in-command required in IFR conditions.

Except as provided in §§ 135.103 and 135.105, no person may operate an aircraft carrying passengers in IFR conditions, unless there is a second-in-command in the aircraft.

§ 135.103 Exception to second-in-command requirement: IFR operations.

The pilot-in-command of an aircraft carrying passengers may conduct IFR operations without a second-in-command under the following conditions:

(a) A takeoff may be conducted under IFR conditions if the weather reports or forecasts, or any combination of them, indicate that the weather along the planned route of flight allows flight under VFR within 15 minutes flying time, at normal cruise speed, from the takeoff airport.

(b) En route IFR may be conducted if unforecast weather conditions below the VFR minimums of this chapter are encountered on a flight that was planned to be conducted under VFR.

(c) An IFR approach may be conducted if, upon arrival at the destination airport, unforecast weather conditions do not allow an approach to be completed under VFR.

(d) When IFR operations are conducted under this section:

(1) The aircraft must be properly equipped for IFR operations under this part.

(2) The pilot must be authorized to conduct IFR operations under this part.

autopilot system.

(a) Except as provided in §§ 135.99 and 135.111, unless two pilots are required by this chapter for operations under VFR, a person may operate an aircraft without a second-in-command, if it is equipped with an operative approved autopilot system and the use of that system is authorized by appropriate operations specifications. No certificate holder may use any person, nor may any person serve, as a pilot-in-command under this section of an aircraft operated [in a commuter operation, as defined in part 119 of this chapter] unless that person has at least 100 hours pilot-in-command flight time in the make and model of aircraft to be flown and has met all other applicable requirements of this part.

(b) The certificate holder may apply for an amendment of its operations specifications to authorize the use of an autopilot system in place of a second-in-command.

(c) The Administrator issues an amendment to the operations specifications authorizing the use of an autopilot system, in place of a second-in-command, if—

(1) The autopilot is capable of operating the aircraft controls to maintain flight and maneuver it about the three axes; and

(2) The certificate holder shows, to the satisfaction of the Administrator, that operations using the autopilot system can be conducted safely and in compliance with this part.

The amendment contains any conditions or limitations on the use of the autopilot system that the Administrator determines are needed in the interest of safety.

(Amdt. 135-3, Eff. 3/1/80); [(Amdt. 135-58, Eff. 1/19/96)]

§ 135.107 Flight attendant crewmember requirement.

No certificate holder may operate an aircraft that has a passenger seating configuration, excluding any pilot seat, of more than 19 unless there is a flight attendant crewmember on board the aircraft.

at all times during the flight.

§ 135.111 Second-in-command required in Category II operations.

No person may operate an aircraft in a Category II operation unless there is a second-in-command of the aircraft.

§ 135.113 Passenger occupancy of pilot seat.

No certificate holder may operate an aircraft type certificate after October 15, 1971, that has a passenger seating configuration, excluding any pilot seat, of more than eight seats if any person other than the pilot-in-command, a second-in-command, a company check airman, or an authorized representative of the Administrator, the National Transportation Safety Board, or the United States Postal Service occupies a pilot seat.

§ 135.115 Manipulation of controls.

No pilot-in-command may allow any person to manipulate the flight controls of an aircraft during flight conducted under this part, nor may any person manipulate the controls during such flight unless that person is—

(a) A pilot employed by the certificate holder and qualified in the aircraft; or

(b) An authorized safety representative of the Administrator who has the permission of the pilot-in-command, is qualified in the aircraft, and is checking flight operations.

§ 135.117 Briefing of passengers before flight.

(a) Before each takeoff each pilot-in-command of an aircraft carrying passengers shall ensure that all passengers have been orally briefed on—

(1) Smoking. [Each passenger shall be briefed on when, where, and under what conditions smoking is prohibited (including, but not limited to, any applicable requirements of part 252 of this title). This briefing shall include a statement that the Federal Aviation Regulations require pas-

any smoke detector installed in an aircraft lavatory; smoking in lavatories; and, when applicable, smoking in passenger compartments.

(2) [The use of safety belts, including instructions on how to fasten and unfasten the safety belts. Each passenger shall be briefed on when, where, and under what conditions the safety belt must be fastened about that passenger. This briefing shall include a statement that the Federal Aviation Regulations require passenger compliance with lighted passenger information signs and crewmember instructions concerning the use of safety belts.]

(3) The placement of seat backs in an upright position before takeoff and landing;

(4) Location and means for opening the passenger entry door and emergency exits;

(5) Location of survival equipment;

(6) If the flight involves extended overwater operation, ditching procedures and the use of required flotation equipment;

(7) If the flight involves operations above 12,000 feet MSL, the normal and emergency use of oxygen; and

(8) Location and operation of fire extinguishers.

(b) Before each takeoff the pilot-in-command shall ensure that each person who may need the assistance of another person to move expeditiously to an exit if an emergency occurs and that person's attendant, if any, has received a briefing as to the procedures to be followed if an evacuation occurs. This paragraph does not apply to a person who has been given a briefing before a previous leg of a flight in the same aircraft.

(c) The oral briefing required by paragraph (a) of this section shall be given by the pilot-in-command or a crewmember.

(d) Notwithstanding the provisions of paragraph (c) of this section, for aircraft certificated to carry 19 passengers or less, the oral briefing required by paragraph (a) of this section shall be given by the pilot-in-command, a crewmember, or other qualified person designated by the certificate holder and approved by the Administrator.

(3) Contain other instructions necessary for the use of emergency equipment on board the aircraft.

(f) The briefing required by paragraph (a) may be delivered by means of an approved recording playback device that is audible to each passenger under normal noise levels.

(Amdt. 135-20, Eff. 1/6/87); (Amdt. 135-25, Eff. 4/23/88); [(Amdt. 135-44, Eff. 10/15/92)]

§ 135.119 Prohibition against carriage of weapons.

No person may, while on board an aircraft being operated by a certificate holder, carry on or about that person a deadly or dangerous weapon, either concealed or unconcealed. This section does not apply to—

(a) Officials or employees of a municipality or a State, or of the United States, who are authorized to carry arms; or

(b) Crewmembers and other persons authorized by the certificate holder to carry arms.

§ 135.121 Alcoholic beverages.

(a) No person may drink any alcoholic beverage aboard an aircraft unless the certificate holder operating the aircraft has served that beverage.

(b) No certificate holder may serve any alcoholic beverage to any person aboard its aircraft if that person appears to be intoxicated.

(c) No certificate holder may allow any person to board any of its aircraft if that person appears to be intoxicated.

§ 135.122 Stowage of food, beverage, and passenger service equipment during aircraft movement on the surface, takeoff, and landing.

[(a) No certificate holder may move an aircraft on the surface, take off, or land when any food, beverage, or tableware furnished by the certificate holder is located at any passenger seat.

tions given by a crewmember with regard to compliance with this system.]

[(Amdt. 135-44, Eff. 10/15/92)]

§ 135.123 Emergency and emergency evacuation duties.

(a) Each certificate holder shall assign to each required crewmember for each type of aircraft as appropriate, the necessary functions to be performed in an emergency or in a situation requiring emergency evacuation. The certificate holder shall ensure that those functions can be practicably accomplished, and will meet any reasonably anticipated emergency including incapacitation of individual crewmembers or their inability to reach the passenger cabin because of shifting cargo in combination cargo passenger aircraft.

(b) The certificate holder shall describe in the manual required under § 135.21 the functions of each category of required crewmembers assigned under paragraph (a) of this section.

§ 135.125 Airplane security.

Certificate holders conducting operations under this part shall comply with the applicable security requirements in part 108 of this chapter.

(Amdt. 135-9, Eff. 12/1/80); (Amdt. 135-10, Eff. 4/1/81)

§ 135.127 Passenger information.

(a) No person may conduct a scheduled flight segment on which smoking is prohibited unless the "No Smoking" passenger information signs are lighted during the entire flight segment, or one or more "No Smoking" placards meeting the requirements of § 25.1541 are posted during the entire flight segment. If both the lighted signs and the placards are used, the signs must remain lighted during the entire flight segment.

Smoking is prohibited on scheduled flight segments—

(1) Between any two points within Puerto Rico, the United States Virgin Islands, the District of Columbia, or any State of the United

any point listed in paragraph (a)(1) of this section and any point in Alaska or Hawaii, or between any point in Alaska and any point in Hawaii.

(b) No person may smoke while a "No Smoking" sign is lighted or while "No Smoking" placards are posted, except that the pilot-in-command may authorize smoking on the flight deck (if it is physically separated from the passenger compartment) except during any movement of an aircraft on the surface, takeoff, and landing.

(c) No person may smoke in any aircraft lavatory.

(d) [No] person may operate an aircraft with a lavatory equipped with a smoke detector unless there is in that lavatory a sign or placard which reads: "Federal law provides for a penalty of up to \$2,000 for tampering with the smoke detector installed in this lavatory."

(e) No person may tamper with, disable, or destroy any smoke detector installed in any aircraft lavatory.

(f) On flight segments other than those described in paragraph (a) of this section, the "No Smoking" sign required by § 135.177(a)(3) of this part must be turned on during any movement of the aircraft on the surface, for each takeoff or landing, and at any other time considered necessary by the pilot-in-command.

(g) The passenger information requirements prescribed in § 91.517(b) and (d) of this chapter are in addition to the requirements prescribed in this section.

(h) Each passenger shall comply with instructions given him or her by crewmembers regarding compliance with paragraphs (b), (c), and (e) of this section.

(Amdt. 135-25, Eff. 4/23/88); (Amdt. 135-35, Eff. 2/25/90); (Amdt. 135-44, Eff. 10/15/92); [(Amdt. 135-60, Eff. 2/26/96)]

§ 135.128 Use of safety belts and child restraint systems.

[(a) Except as provided in this paragraph, each person on board an aircraft operated under this part shall occupy an approved seat or berth with a sepa-

more than one person who has reached his or her second birthday. Notwithstanding the preceding requirements, a child may:

[(1) Be held by an adult who is occupying an approved seat or berth if that child has not reached his or her second birthday; or

[(2) Notwithstanding any other requirement of this chapter, occupy an approved child restraint system furnished by the certificate holder or one of the persons described in paragraph (a)(2)(i) of this section, provided:

[(i) The child is accompanied by a parent, guardian, or attendant designated by the child's parent or guardian to attend to the safety of the child during the flight;

[(ii) The approved child restraint system bears one or more labels as follows:

[(A) Seats manufactured to U.S. standards between January 1, 1981, and February 25, 1985, must bear the label: "This child restraint system conforms to all applicable Federal motor vehicle safety standards." Vest- and harness-type child restraint systems manufactured before February 26, 1985, bearing such a label are not approved for the purposes of this section;

[(B) Seats manufactured to U.S. standards on or after February 26, 1985, must bear two labels:

[(1) "This child restraint system conforms to all applicable Federal motor vehicle safety standards"; and

[(2) "THIS RESTRAINT IS CERTIFIED FOR USE IN MOTOR VEHICLES AND AIRCRAFT" in red lettering;

[(C) Seats that do not qualify under paragraphs (a)(2)(ii)(A) and (a)(2)(ii)(B) of this section must bear either a label showing approval of a foreign government or a label showing that the seat was manufactured under the standards of the United Nations; and

[(iii) The certificate holder complies with the following requirements:

[(b) No certificate holder may prohibit a child, if requested by the child's parent, guardian, or designated attendant from occupying a child restraint system furnished by the child's parent, guardian, or designated attendant, provided the child holds a ticket for an approved seat or berth, or such seat or berth is otherwise made available by the certificate holder for the child's use, and the requirements contained in paragraphs (a)(2)(i) through (a)(2)(iii) of this section are met. This section does not prohibit the certificate holder from providing child restraint systems or, consistent with safe operating practices, determining the most appropriate passenger seat location for the child restraint system.]

[(Amdt. 135-44, Eff. 10/15/92)]

§ 135.129 Exit seating.

(a)(1) *Applicability.* This section applies to all certificate holders operating under this part, except for on-demand operations with aircraft having 19 or fewer passenger seats and commuter operations with aircraft having 9 or fewer passenger seats.

(2) *Duty to make determination of suitability.* Each certificate holder shall determine, to the extent necessary to perform the applicable functions of paragraph (d) of this section, the suitability of each person it permits to occupy an exit seat. For the purpose of this section—

(i) *Exit seat means—*

(A) Each seat having direct access to an exit; and

(B) Each seat in a row of seats through which passengers would have to pass to gain access to an exit, from the first seat inboard of the exit to the first aisle inboard of the exit.

(ii) A passenger seat having *direct access* means a seat from which a passenger can proceed directly to the exit without entering an aisle or passing around an obstruction.

(3) *Persons designated to make determination.* Each certificate holder shall make the passenger exit seating determinations required by this para-

approval as part of the procedures required to be submitted for approval under paragraphs (n) and (p) of this section.

(b) No certificate holder may seat a person in a seat affected by this section if the certificate holder determines that it is likely that the person would be unable to perform one or more of the applicable functions listed in paragraph (d) of this section because—

(1) The person lacks sufficient mobility, strength, or dexterity in both arms and hands, and both legs:

(i) To reach upward, sideways, and downward to the location of emergency exit and exit-slide operating mechanisms;

(ii) To grasp and push, pull, turn, or otherwise manipulate those mechanisms;

(iii) To push, shove, pull, or otherwise open emergency exits;

(iv) To lift out, hold, deposit on nearby seats, or maneuver over the seatbacks to the next row objects the size and weight of over-wing window exit doors;

(v) To remove obstructions of size and weight similar over-wing exit doors;

(vi) To reach the emergency exit expeditiously;

(vii) To maintain balance while removing obstructions;

(viii) To exit expeditiously;

(ix) To stabilize an escape slide after deployment; or

(x) To assist others in getting off an escape slide;

(2) The person is less than 15 years of age or lacks the capacity to perform one or more of the applicable functions listed in paragraph (d) of this section without the assistance of an adult companion, parent, or other relative;

(3) The person lacks the ability to read and understand instructions required by this section and related to emergency evacuation provided by the certificate holder in printed or graphic form or the ability to understand oral crew commands.

(6) The person lacks the ability adequately to impart information orally to other passengers; or,

(7) The person has:

(i) A condition or responsibilities, such as caring for small children, that might prevent the person from performing one or more of the applicable functions listed in paragraph (d) of this section; or

(ii) A condition that might cause the person harm if he or she performs one or more of the applicable functions listed in paragraph (d) of this section.

(c) Each passenger shall comply with instructions given by a crewmember or other authorized employee of the certificate holder implementing exit seating restrictions established in accordance with this section.

(d) Each certificate holder shall include on passenger information cards, presented in the language in which briefings and oral commands are given by the crew, at each exit seat affected by this section, information that, in the event of an emergency in which a crewmember is not available to assist, a passenger occupying an exit seat may use if called upon to perform the following functions:

(1) Locate the emergency exit;

(2) Recognize the emergency exit opening mechanism;

(3) Comprehend the instructions for operating the emergency exit;

(4) Operate the emergency exit;

(5) Assess whether opening the emergency exit will increase the hazards to which passengers may be exposed;

(6) Follow oral directions and hand signals given by a crewmember;

(7) Stow or secure the emergency exit door so that it will not impede use of the exit;

(8) Assess the conditions of an escape slide, activated the slide, and stabilize the slide after deployment to assist others in getting off the slide;

(9) Pass expeditiously through the emergency exit; and

or she—

(i) Cannot meet the selection criteria set forth in paragraph (b) of this section;

(ii) Has a nondiscernible condition that will prevent him or her from performing the applicable functions listed in paragraph (d) of this section;

(iii) May suffer bodily harm as the result of performing one or more of those functions; or

(iv) Does not wish to perform those functions; and,

(2) In each language used by the certificate holder for passenger information cards, a request that a passenger identify himself or herself to allow reseating if he or she lacks the ability to read, speak, or understand the language or the graphic form in which instructions required by this section and related to emergency evacuation are provided by the certificate holder, or the ability to understand the specified language in which crew commands will be given in an emergency;

(3) May suffer bodily harm as the result of performing one or more of those functions; or,

(4) Does not wish to perform those functions.

A certificate holder shall not require the passenger to disclose his or her reason for needing reseating.

(f) Each certificate holder shall make available for inspection by the public at all passenger loading gates and ticket counters at each airport where it conducts passenger operations, written procedures established for making determinations in regard to exit row seating.

(g) No certificate holder may allow taxi or pushback unless at least one required crewmember has verified that no exit seat is occupied by a person the crewmember determines is likely to be unable to perform the applicable functions listed in paragraph (d) of this section.

(h) Each certificate holder shall include in its passenger briefings a reference to the passenger information cards, required by paragraphs (d) and (e), the selection criteria set forth in paragraph (b),

prevent him or her from performing the applicable functions listed in paragraph (d) of this section;

(3) May suffer bodily harm as the result of performing one or more of those functions; or,

(4) Does not wish to perform those functions.

A certificate holder shall not require the passenger to disclose his or her reason for needing reseating.

(j) Removed and Reserved

(k) In the event a certificate holder determines in accordance with this section that it is likely that a passenger assigned to an exit seat would be unable to perform the functions listed in paragraph (d) of this section or a passenger requests a non-exit seat, the certificate holder shall expeditiously relocate the passenger to a non-exit seat.

(l) In the event of full booking in the non-exit seats and if necessary to accommodate a passenger being relocated from an exit seat, the certificate holder shall move a passenger who is willing and able to assume the evacuation functions that may be required, to an exit seat.

(m) A certificate holder may deny transportation to any passenger under this section only because—

(1) The passenger refuses to comply with instructions given by a crewmember or other authorized employee of the certificate holder implementing exit seating restrictions established in accordance with this section, or

this section;

(iii) The requirements for airport information, passenger information cards, crewmember verification of appropriate seating in exit seats, passenger briefings, seat assignments, and denial of transportation as set forth in this section;

(iv) How to resolve disputes arising from implementation of this section, including identification of the certificate holder employee on the airport to whom complaints should be addressed for resolution; and,

(2) Submit their procedures for preliminary review and approval to the principal operations inspectors assigned to them at the [certificate-holding district office.]

(o) Certificate holders shall assign seats prior to boarding consistent with the criteria listed in paragraph (b) and the functions listed in paragraph (d) of this section, to the maximum extent feasible.

(p) The procedures required by paragraph (n) of this section will not become effective until final approval is granted by the Director, Flight Standards Service, Washington, DC Approval will be based solely upon the safety aspects of the certificate holder's procedures.

(Amdt. 135-36, Eff. 4/5/90); (Amdt. 135-45, Eff. 10/27/92); (Amdt. 135-50, Eff. 7/29/94); [(Amdt. 135-60, Eff. 2/26/96)]

requirements for operations under this part. The requirements of this subpart are in addition to the aircraft and equipment requirements of part 91 of this chapter. However, this part does not require the duplication of any equipment required by this chapter.

§ 135.143 General requirements.

(a) No person may operate an aircraft under this part unless that aircraft and its equipment meet the applicable regulations of this chapter.

(b) Except as provided in § 135.179, no person may operate an aircraft under this part unless the required instruments and equipment in it have been approved and are in an operable condition.

(c) ATC transponder equipment installed within the time periods indicated below must meet the performance and environmental requirements of the following TSO's.

(1) *Through January 1, 1992:*

(i) Any class of TSO-C74b or any class of TSO-C74c as appropriate, provided that the equipment was manufactured before January 1, 1990; or

(ii) The appropriate class of TSO-C112 (Mode S).

(2) *After January 1, 1992:* The appropriate class of TSO-C112 (Mode S). For purposes of paragraph (c)(2) of this section, "installation" does not include—

(i) Temporary installation of TSO-C74b or TSO-C74c substitute equipment, as appropriate, during maintenance of the permanent equipment;

(ii) Reinstallation of equipment after temporary removal for maintenance; or

(iii) For fleet operations, installation of equipment in a fleet aircraft after removal of the equipment for maintenance from another aircraft in the same operator's fleet.

(Amdt. 135-22, Eff. 5/26/87)

airplane, or an aircraft for which two pilots are required by this chapter for operations under VFR, if it has not previously proved that aircraft or an aircraft of the same make and similar design in any operation under this part unless, in addition to the aircraft certification tests, at least 25 hours of proving tests acceptable to the Administrator have been flown by that certificate holder including—

(1) Five hours of night time, if night flights are to be authorized;

(2) Five instrument approach procedures under simulated or actual instrument weather conditions, if IFR flights are to be authorized; and

(3) Entry into a representative number of en route airports as determined by the Administrator.

(b) No certificate holder may carry passengers in an aircraft during proving tests, except those needed to make the tests and those designated by the Administrator to observe the tests. However, pilot flight training may be conducted during the proving tests.

(c) For the purposes of paragraph (a) of this section, an aircraft is not considered to be of similar design if an alteration includes—

(1) The installation of powerplants other than those of a type similar to those with which it is certificated; or

(2) Alterations to the aircraft or its components that materially affect flight characteristics.

(d) The Administrator may authorize deviations from this section if the Administrator finds that special circumstances make full compliance with this section necessary.

§ 135.147 Dual controls required.

No person may operate an aircraft in operations requiring two pilots unless it is equipped with functioning dual controls. However, if the aircraft type certification operating limitations do not require two pilots, a throwover control wheel may be used in place of two control wheels.

source;

(c) For turbojet airplanes, in addition to two gyroscopic bank-and-pitch indicators (artificial horizons) for use at the pilot stations, a third indicator that is installed in accordance with the instrument requirements prescribed in § 121.305(j) of this chapter.

(d) [Reserved]

(e) For turbine-powered aircraft, any other equipment as the Administrator may require.

(Amdt. 135-1, Eff. 5/7/79); (Amdt. 135-34, Eff. 11/27/89); (Amdt. 135-38, Eff. 11/26/90)

§ 135.150 Public address and crewmember interphone systems.

No person may operate an aircraft having a passenger seating configuration, excluding any pilot seat, of more than 19 unless it is equipped with—

(a) A public address system which—

(1) Is capable of operation independent of the crewmember interphone system required by paragraph (b) of this section, except for handsets, headsets, microphones, selector switches, and signaling devices;

(2) Is approved in accordance with § 21.305 of this chapter;

(3) Is accessible for immediate use from each of two flight crewmember stations in the pilot compartment;

(4) For each required floor-level passenger emergency exit which has an adjacent flight attendant seat, has a microphone which is readily accessible to the seated flight attendant, except that one microphone may serve more than one exit, provided the proximity of the exits allows unassisted verbal communication between seated flight attendants;

(5) Is capable of operation within 10 seconds by a flight attendant at each of those stations in the passenger compartment from which its use is accessible;

(6) Is audible at all passenger seats, lavatories, and flight attendant seats and work stations; and

(2) Is approved in accordance with § 21.305 of this chapter;

(3) Provides a means of two-way communication between the pilot compartment and—

(i) Each passenger compartment; and

(ii) Each galley located on other than the main passenger deck level;

(4) Is accessible for immediate use from each of two flight crewmember stations in the pilot compartment;

(5) Is accessible for use from at least one normal flight attendant station in each passenger compartment;

(6) Is capable of operation within 10 seconds by a flight attendant at each of those stations in each passenger compartment from which its use is accessible; and

(7) For large turbojet-powered airplanes—

(i) Is accessible for use at enough flight attendant stations so that all floor-level emergency exits (or entryways to those exits in the case of exits located within galleys) in each passenger compartment are observable from one or more of those stations so equipped;

(ii) Has an alerting system incorporating aural or visual signals for use by flight crewmembers to alert flight attendants and for use by flight attendants to alert flight crewmembers;

(iii) For the alerting system required by paragraph (b)(7)(ii) of this section, has a means for the recipient of a call to determine whether it is a normal call or an emergency call; and

(iv) When the airplane is on the ground, provides a means of two-way communication between ground personnel and either of at least two flight crewmembers in the pilot compartment. The interphone system station for use by ground personnel must be so located that personnel using the system may avoid visible detection from within the airplane.

Docket No. 24995 (54 FR 43926) Eff. 10/27/89
(Amdt. 135-34, Eff. 11/27/89)

ated.
23.1457(a)(1) and (2), (b), (c), (d), (e), (f), and (g); § 25.1457(a)(1) and (2), (b), (c), (d), (e), (f), and (g); § 27.1457(a)(1) and (2), (b), (c), (d), (e), (f), and (g); § 29.1457(a)(1) and (2), (b), (c), (d), (e), (f), and (g); of this chapter, as applicable; and

(2) Is operated continuously from the use of the check list before the flight to completion of the final check list at the end of the flight.

(b) [No] person may operate a multiengine, turbine-powered airplane or rotorcraft having a passenger seating configuration of 20 or more seats unless it is equipped with an approved cockpit voice recorder that—

(1) Is installed in compliance with § 23.1457, § 25.1457, § 27.1457 or § 29.1457 of this chapter, as applicable; and

(2) Is operated continuously from the use of the check list before the flight to completion of the final check list at the end of the flight.

(c) In the event of an accident, or occurrence requiring immediate notification of the National Transportation Safety Board which results in termination of the flight, the certificate holder shall keep the recorded information for at least 60 days or, if requested by the Administrator or the Board, for a longer period. Information obtained from the record may be used to assist in determining the cause of accidents or occurrences in connection with investigations. The Administrator does not use the record in any civil penalty or certificate action.

(d) For those aircraft equipped to record the uninterrupted audio signals received by a boom or a mask microphone the flight crewmembers are required to use the boom microphone below 18,000 feet mean sea level. No person may operate a large turbine-engine-powered airplane manufactured after October 11, 1991, or on which a cockpit voice recorder has been installed after October 11, 1991, unless it is equipped to record the uninterrupted audio signal received by a boom or mask microphone in accordance with § 25.1457(c)(5) of this chapter.

(e) In complying with this section, an approved cockpit voice recorder having an erasure feature

(Amdt. 135-23, Eff. 5/26/87); (Amdt. 135-26, Eff. 10/11/88); [(Amdt. 135-60, Eff. 2/26/96)]

§ 135.152 Flight recorders.

(a) No person may operate a multiengine, turbine-powered airplane or rotorcraft having a passenger seating configuration, excluding any pilot seat, of 10 to 19 seats, that is brought onto the U.S. register after October 11, 1991, unless it is equipped with one or more approved flight recorders that utilize a digital method of recording and storing data, and a method of readily retrieving that data from the storage medium. The parameters specified in appendix B or C, as applicable, of this part must be recorded within the range, accuracy, resolution, and recording intervals as specified. The recorder shall retain no less than 8 hours of aircraft operation.

(b) After October 11, 1991, no person may operate a multiengine, turbine-powered airplane having a passenger seating configuration of 20 to 30 seats or a multiengine, turbine-powered rotorcraft having a passenger seating configuration of 20 or more seats unless it is equipped with one or more approved flight recorders that utilize a digital method of recording and storing data, and a method of readily retrieving that data from the storage medium. The parameters in appendix D or E of this part, as applicable, that are set forth below, must be recorded within the ranges, accuracies, resolutions, and sampling intervals as specified:

(1) Except as provided in paragraph (b)(3) of this section for aircraft type certificated before October 1, 1969, the following parameters must be recorded:

- (i) Time;
- (ii) Altitude;
- (iii) Airspeed;
- (iv) Vertical acceleration;
- (v) Heading;
- (vi) Time of each radio transmission to or from air traffic control;
- (vii) Pitch attitude;
- (viii) Roll attitude;

- (i) Time;
- (ii) Altitude;
- (iii) Airspeed;
- (iv) Vertical acceleration;
- (v) Heading;
- (vi) Time of each radio transmission either to or from air traffic control;
- (vii) Pitch attitude;
- (viii) Roll attitude;
- (ix) Longitudinal acceleration;
- (x) Pitch trim position;
- (xi) Control column or pitch control surface position;
- (xii) Control wheel or lateral control surface position;
- (xiii) Rudder pedal or yaw control surface position;
- (xiv) Thrust of each engine;
- (xv) Position of each thrust reverser;
- (xvi) Trailing edge flap or cockpit flap control position; and
- (xvii) Leading edge flap or cockpit flap control position.

(3) For aircraft manufactured after October 11, 1991, all of the parameters listed in appendix D or E of this part, as applicable, must be recorded.

(c) Whenever a flight recorder required by this section is installed, it must be operated continuously from the instant the airplane begins the takeoff roll or the rotorcraft begins the lift-off until the airplane has completed the landing roll or the rotorcraft has landed at its destination.

(d) Except as provided in paragraph (c) of this section, and except for recorded data erased as authorized in this paragraph, each certificate holder shall keep the recorded data prescribed in paragraph (a) of this section until the aircraft has been operating for at least 8 hours of the operating time specified in paragraph (c) of this section. In addition, each certificate holder shall keep the recorded data prescribed in paragraph (b) of this section for an airplane until the airplane has been operating for at least 25 hours, and for a rotorcraft until the rotorcraft has been

60 days.

(e) In the event of an accident or occurrence that requires that immediate notification of the National Transportation Safety Board under 49 CFR part 830 of its regulations and that results in termination of the flight, the certificate holder shall remove the recording media from the aircraft and keep the recorded data required by paragraphs (a) and (b) of this section for at least 60 days or for a longer period upon request of the Board or the Administrator.

(f) Each flight recorder required by this section must be installed in accordance with the requirements of §§ 23.1459, 25.1459, 27.1459, or 29.1459, as appropriate, of this chapter. The correlation required by paragraph (c) of §§ 23.1459, 25.1459, 27.1459, or 29.1459, as appropriate, of this chapter need be established only on one aircraft of a group of aircraft:

- (1) That are of the same type;
- (2) On which the flight recorder models and their installations are the same; and
- (3) On which there are no differences in the type design with respect to the installation of the first pilot's instruments associated with the flight recorder. The most recent instrument calibration, including the recording medium from which this calibration is derived, and the recorder correlation must be retained by the certificate holder.

(g) Each flight recorder required by this section that records the data specified in paragraphs (a) and (b) of this section must have an approved device to assist in locating that recorder under water.

Docket No. 25530 (53 FR 26151) Eff. 7/11/88;
(Amdt. 135-26, Eff. 10/11/88)

§ 135.153 Ground proximity warning system.

[(a) Except as provided in paragraph (b) of this section, no person may operate a turbine-powered airplane having a passenger seating configuration, excluding any pilot seat, of 10 seats or more, unless

(1) The system must have been approved by the Administrator;

(2) The system must have a means of alerting the pilot when a malfunction occurs in the system; and

(3) Procedures must have been established by the certification holder to ensure that the performance of the system can be appropriately monitored.

(c) For a system required by this section, the Airplane Flight Manual shall contain—

(1) Appropriate procedures for—

(i) The use of the equipment;

(ii) Proper flight crew action with respect to the equipment; and

(iii) Deactivation for planned abnormal and emergency conditions; and

(2) An outline of all input sources that must be operating.

(d) No person may deactivate a system required by this section except under procedures in the Airplane Flight Manual.

(e) Whenever a system required by this section is deactivated, an entry shall be made in the airplane maintenance record that includes the date and time of deactivation.

(Amdt. 135-6, Eff. 9/10/80); (Amdt. 135-33, Eff. 10/25/89); (Amdt. 135-42, Eff. 4/20/92); [(Amdt. 135-60, Eff. 2/26/96)]

§ 135.155 Fire extinguishers: Passenger-carrying aircraft.

No person may operate an aircraft carrying passengers unless it is equipped with hand fire extinguishers of an approved type for use in crew and passenger compartments as follows—

(a) The type and quantity of extinguishing agent must be suitable for all the kinds of fires likely to occur;

(b) At least one hand fire extinguisher must be provided and conveniently located on the flight deck for use by the flight crew; and

(c) At least one hand fire extinguisher must be conveniently located in the passenger compartment of each aircraft having a passenger seating configu-

under § 135.89(a) and to supply, when flying—

(1) At altitudes above 10,000 feet through 15,000 feet MSL, oxygen to at least 10 percent of the occupants of the aircraft, other than the pilots, for that part of the flight at those altitudes that is of more than 30 minutes duration; and

(2) Above 15,000 feet MSL oxygen to each occupant of the aircraft other than the pilots.

(b) *Pressurized aircraft.* No person may operate a pressurized aircraft

(1) At altitudes above 25,000 feet MSL, unless at least a 10-minute supply of supplemental oxygen is available for each occupant of the aircraft, other than the pilots, for use when a descent is necessary due to loss of cabin pressurization; and

(2) Unless it is equipped with enough oxygen dispensers and oxygen to comply with paragraph (a) of this section whenever the cabin pressure altitude exceeds 10,000 feet MSL and, if the cabin pressurization fails, to comply with § 135.89(a) or to provide a 2-hour supply for each pilot, whichever is greater, and to supply when flying—

(i) At altitudes above 10,000 feet through 15,000 feet MSL, oxygen to at least 10 percent of the occupants of the aircraft, other than the pilots, for that part of the flight at those altitudes that is of more than 30 minutes duration; and

(ii) Above 15,000 feet MSL, oxygen to each occupant of the aircraft, other than the pilots, for one hour unless, at all times during flight above that altitude, the aircraft can safely descend to 15,000 feet MSL within four minutes, in which case only a 30-minute supply is required.

(c) The equipment required by this section must have a means—

(1) To enable the pilots to readily determine, in flight, the amount of oxygen available in each source of supply and whether the oxygen is being delivered to the dispensing units; or

(2) In the case of individual dispensing units, to enable each user to make those determinations

section, after April 12, 1981, no person may operate a transport category airplane equipped with a flight instrument pitot heating system unless the airplane is also equipped with an operable pitot heat indication system that complies with § 25.1326 of this chapter in effect on April 12, 1978.

(b) A certificate holder may obtain an extension of the April 12, 1981, compliance date specified in paragraph (a) of this section, but not beyond April 12, 1983, from the Director, Flight Standards Service if the certificate holder—

(1) Shows that due to circumstances beyond its control it cannot comply by the specified compliance date; and

(2) Submits by the specified compliance date a schedule for compliance, acceptable to the Director, indicating that compliance will be achieved at the earliest practicable date.

(Amdt. 135-17, Eff. 9/30/81); (Amdt. 135-33, Eff. 10/25/89)

§ 135.159 Equipment requirements: Carrying passengers under VFR at night or under VFR over-the-top conditions.

No person may operate an aircraft carrying passengers under VFR at night or under VFR over-the-top unless it is equipped with—

(a) A gyroscopic rate-of-turn indicator except on the following aircraft:

(1) Airplanes with a third attitude instrument system usable through flight attitudes of 360 degrees of pitch-and-roll and installed in accordance with the instrument requirements prescribed in § 121.3056) of this chapter.

(2) Helicopters with a third attitude instrument system usable through flight attitudes of ± 80 degrees of pitch and ± 120 degrees of roll and installed in accordance with § 29.1303(g) of this chapter.

(3) Helicopters with a maximum certificated takeoff weight of 6,000 pounds or less.

(b) A slip skid indicator.

(c) A gyroscopic bank-and-pitch indicator.

(d) A gyroscopic direction indicator.

rays or which are shielded from the pilot's eyes, and

(3) A flashlight having at least two size "D" cells or equivalent.

(g) For the purpose of paragraph (e) of this section, a continuous in-flight electrical load includes one that draws current continuously during flight, such as radio equipment, electrically driven instruments and lights, but does not include occasional intermittent loads.

(h) Notwithstanding provisions of paragraphs (b), (c), and (d), helicopters having a maximum certificated takeoff weight of 6,000 pounds or less may be operated until January 6, 1988, under visual flight rules at night without a slip skid indicator, a gyroscopic bank-and-pitch indicator, or a gyroscopic direction indicator.

Docket No. 24550 (51 FR 40709) Eff. 11/7/86);

(Amdt. 135-20, Eff. 1/6/87); (Amdt. 135-38, Eff. 11/26/90)

§ 135.161 Radio and navigational equipment: Carrying passengers under VFR at night or under VFR over-the-top.

(a) No person may operate an aircraft carrying passengers under VFR at night, or under VFR over-the-top, unless it has two-way communications equipment able, at least in flight, to transmit to, and receive from, ground facilities 25 miles away.

(b) No person may operate an aircraft carrying passengers under VFR over-the-top unless it has radio navigational equipment able to receive radio signals from the ground facilities to be used.

(c) No person may operate an airplane carrying passengers under VFR at night unless it has radio navigational equipment able to receive radio signals from the ground facilities to be used.

§ 135.163 Equipment requirements: Aircraft carrying passengers under IFR.

No person may operate an aircraft under IFR, carrying passengers, unless it has—

(a) A vertical speed indicator;

(b) A free-air temperature indicator;

(f) For a single-engine aircraft, a generator or generators able to supply all probable combinations of continuous inflight electrical loads for required equipment and for recharging the battery;

(g) For multiengine aircraft, at least two generators each of which is on a separate engine, of which any combination of one-half of the total number are rated sufficiently to supply the electrical loads of all required instruments and equipment necessary for safe emergency operation of the aircraft except that for multiengine helicopters, the two required generators may be mounted on the main rotor drive train; and

(h) Two independent sources of energy (with means of selecting either), of which at least one is an engine-drive pump or generator, each of which is able to drive all gyroscopic instruments and installed so that failure of one instrument or source does not interfere with the energy supply to the remaining instruments or the other energy source, unless, for single-engine aircraft, the rate-of-turn indicator has a source of energy separate from the bank and pitch and direction indicators. For the purpose of this paragraph, for multiengine aircraft, each engine-driven source of energy must be on a different engine.

(i) For the purpose of paragraph (f) of this section, a continuous inflight electrical load includes one that draws current continuously during flight, such as radio equipment, electrically driven instruments, and lights, but does not include occasional intermittent loads.

§ 135.165 Radio and navigational equipment: Extended overwater or IFR operations.

(a) No person may operate a turbojet airplane having a passenger seating configuration, excluding any pilot seat, of 10 seats or more, or a multiengine airplane [in a commuter operation, as defined in part 119 of this chapter], under IFR or in extended overwater operations unless it has at least the following radio communication and navigational equipment appropriate to the facilities to be used which are capable of transmitting to and receiving

that specified in paragraph (a) of this section, under IFR or in extended overwater operations unless it has at least the following radio communication and navigational equipment appropriate to the facilities to be used and which are capable of transmitting to, and receiving from, at any place on the route, at least one ground facility:

(1) A transmitter, (2) two microphones, (3) two headsets or one headset and one speaker, (4) a marker beacon receiver, (5) two independent receivers for navigation, (6) two independent receivers for communications, and (7) for extended overwater operations only, an additional transmitter.

(c) For the purpose of paragraphs (a)(5), (a)(6), (b)(5), and (b)(6) of this section, a receiver is independent if the function of any part of it does not depend on the functioning of any part of another receiver. However, a receiver that can receive both communications and navigational signals may be used in place of a separate communications receiver and a separate navigational signal receiver.

[(Amdt. 135-58, Eff. 1/19/96)]

§ 135.167 Emergency equipment: Extended overwater operations.

(a) No person may operate an aircraft in extended overwater operations unless it carries, installed in conspicuously marked locations easily accessible to the occupants if a ditching occurs, the following equipment:

(1) An approved life preserver equipped with an approved survivor locator light for each occupant of the aircraft. The life preserver must be easily accessible to each seated occupant.

(2) Enough approved life rafts of a rated capacity and buoyancy to accommodate the occupants of the aircraft.

(b) Each life raft required by paragraph (a) of this section must be equipped with or contain at least the following:

- (1) One approved survivor locator light.
- (2) One approved pyrotechnic signaling device.
- (3) Either—

- (vii) One police whistle;
- (viii) One raft knife;
- (ix) One CO₂ bottle for emergency inflation;
- (x) One inflation pump;
- (xi) Two oars;
- (xii) One 75-foot retaining line;
- (xiii) One magnetic compass;
- (xiv) One dye marker;
- (xv) One flashlight having at least two size "D" cells or equivalent;

(xvi) A two-day supply of emergency food rations supplying at least 1,000 calories a day for each person;

(xvii) For each two persons the raft is rated to carry, two pints of water or one sea water desalting kit;

(xviii) One fishing kit; and

(xix) One book on survival appropriate for the area in which the aircraft is operated.

(c) [No person may operate an airplane in extended overwater operations unless there is attached to one of the life rafts required by paragraph (a) of this section, an approved survival type emergency locator transmitter. Batteries used in this transmitter must be replaced (or recharged, if the batteries are rechargeable) when the transmitter has been in use for more than 1 cumulative hour, or, when 50 percent of their useful life (or for rechargeable batteries, 50 percent of their useful life of charge) has expired, as established by the transmitter manufacturer under its approval. The new expiration date for replacing (or recharging) the battery must be legibly marked on the outside of the transmitter. The battery useful life (or useful life of charge) requirements of this paragraph do not apply to batteries (such as water-activated batteries) that are essentially unaffected during probable storage intervals.]

(Amdt. 135-4, Eff. 9/9/80); (Amdt. 135-20, Eff. 1/6/87); [(Amdt. 135-49, Eff. 6/21/94)]

§ 135.169 Additional airworthiness requirements.

(a) [Except for commuter category airplanes, no person may operate a large airplane unless it meets

(1) in the transport category,

(2) Before July 1, 1970, in the normal category and meets special conditions issued by the Administrator for airplanes intended for use in operations under this part;

(3) Before July 19, 1970, in the normal category and meets the additional airworthiness standards in Special Federal Aviation Regulation No. 23;

(4) In the normal category and meets the additional airworthiness standards in appendix A;

(5) In the normal category and complies with section 1.(a) of Special Federal Aviation Regulation No. 41;

(6) In the normal category and complies with section 1.(b) of Special Federal Aviation Regulation No. 41; or

(7) In the commuter category.

(c) No person may operate a small airplane with a passenger seating configuration, excluding any pilot seat, of 10 seats or more, with a seating configuration greater than the maximum seating configuration used in that type airplane in operations under this part before August 19, 1977. This paragraph does not apply to—

(1) An airplane that is type certificated in the transport category; or

(2) An airplane that complies with—

(i) Appendix A of this part provided that its passenger seating configuration, excluding pilot seats, does not exceed 19 seats; or

(ii) Special Federal Aviation Regulation No. 41.

(d) Cargo or baggage compartments:

(1) After March 20, 1991, each Class C or D compartment, as defined in § 25.857 of part 25 of this chapter, greater than 200 cubic feet in volume in a transport category airplane type certificated after January 1, 1958, must have ceiling and sidewall panels which are constructed of:

(i) Glass fiber reinforced resin;

(ii) Materials which meet the test requirements of part 25, appendix F, part III of this chapter; or

§ 135.170 Materials for compartment interiors.

[(a) No person may operate an airplane that conforms to an amended or supplemental type certificate issued in accordance with SFAR No. 41 for a maximum certificated takeoff weight in excess of 12,500 pounds unless within one year after issuance of the initial airworthiness certificate under that SFAR, the airplane meets the compartment interior requirements set forth in § 25.853(a) in effect March 6, 1995 (formerly § 25.853(a), (b), (b-1), (b-2), and (b-3) of this chapter in effect on September 26, 1978).]

(b) [Except for commuter category airplanes and airplanes certificated under Special Federal Aviation Regulation No. 41, no person may operate a large airplane unless it meets the following additional airworthiness requirements:]*

[(1) Except for those materials covered by paragraph (b)(2) of this section, all materials in each compartment used by the crewmembers or passengers must meet the requirements of § 25.853 of this chapter in effect as follows or later amendment thereto:

[(i) Except as provided in paragraph (b)(1)(iv) of this section, each airplane with a passenger capacity of 20 or more and manufactured after August 19, 1988, but prior to August 20, 1990, must comply with the heat release rate testing provisions of § 25.853(d) in effect March 6, 1995 (formerly § 25.853(a-1) in effect on August 20, 1986), except that the total heat release over the first 2 minutes of sample exposure rate must not exceed 100 kilowatt minutes per square meter and the peak heat release rate must not exceed 100 kilowatts per square meter.

[(ii) Each airplane with a passenger capacity of 20 or more and manufactured after August 19, 1990, must comply with the heat release rate and smoke testing provisions of § 25.853(d) in effect March 6, 1995 (formerly § 25.853(a-1) in effect on September 26, 1988).

38, 1972.
[(iv) Except as provided in paragraph (b)(1)(v) or (vi) of this section, each airplane for which the application for type certificate was filed after May 1, 1972, must comply with the material requirements under which the airplane was type certificated regardless of the passenger capacity if there is a substantially complete replacement of the cabin interior after that date.

[(v) Except as provided in paragraph (b)(1)(vi) of this section, each airplane that was type certificated after January 1, 1958, must comply with the heat release testing provisions of § 25.853(d) in effect March 6, 1995 (formerly § 25.853(a-1) in effect on August 20, 1986), if there is a substantially complete replacement of the cabin interior components identified in that paragraph on or after that date, except that the total heat release over the first 2 minutes of sample exposure shall not exceed 100 kilowatt-minutes per square meter and the peak heat release rate shall not exceed 100 kilowatts per square meter.

[(vi) Each airplane that was type certificated after January 1, 1958, must comply with the heat release rate and smoke testing provisions of § 25.853(d) in effect March 6, 1995 (formerly § 25.853(a-1) in effect on August 20, 1986), if there is a substantially complete replacement of the cabin interior components identified in that paragraph after August 19, 1990.

[(vii) Contrary provisions of this section notwithstanding, the Manager of the Transport Airplane Directorate, Aircraft Certification Service, Federal Aviation Administration, may authorize deviation from the requirements of paragraph (b)(1)(i), (b)(1)(ii), (b)(1)(v), or (b)(1)(vi) of this section for specific components of the cabin interior that do not meet applicable flammability and smoke emission requirements, if the determination is made that special circumstances exist that make compliance impractical. Such grants of deviation will be limited to those airplanes manufactured

components for which timely compliance will not be achieved, credible reasons for such non-compliance.

[(viii) Contrary provisions of this section notwithstanding, galley carts and standard galley containers that do not meet the flammability and smoke emission requirements of § 25.853(d) in effect March 6, 1995 (formerly § 25.853(a-1) in effect on August 20, 1986), may be used in airplanes that must meet the requirements of paragraph (b)(1)(i), (b)(1)(ii), (b)(1)(iv), or (b)(1)(vi) of this section provided the galley carts or standard containers were manufactured prior to March 6, 1995.

[(2) For airplanes type certificated after January 1, 1958, seat cushions, except those on flight crewmember seats, in any compartment occupied by crew or passengers must comply with the requirements pertaining to fire protection of seat cushions in § 25.853(c) effective November 26, 1984.]

(Amdt. 135-2, Eff. 10/17/79); [(Amdt. 135-55, Eff. 3/6/95)]; [(Amdt. 135-56, Eff. 3/6/95)]*

§ 135.171 Shoulder harness installation at flight crewmember stations.

(a) No person may operate a turbojet aircraft or an aircraft having a passenger seating configuration, excluding any pilot seat, of 10 seats or more unless it is equipped with an approved shoulder harness installed for each flight crewmember station.

(b) Each flight crewmember occupying a station equipped with a shoulder harness must fasten the shoulder harness during takeoff and landing, except that the shoulder harness may be unfastened if the crewmember cannot perform the required duties with the shoulder harness fastened.

§ 135.173 Airborne thunderstorm detection equipment requirements.

(a) No person may operate an aircraft that has a passenger seating configuration, excluding any pilot seat, of 10 seats or more in passenger-carrying operations, except a helicopter operating under day

many hazardous weather conditions that can be detected with airborne thunderstorm detection equipment may reasonably be expected along the route to be flown, unless the helicopter is equipped with either approved thunderstorm detection equipment or approved airborne weather radar equipment.

(c) No person may begin a flight under IFR or night VFR conditions when current weather reports indicate that thunderstorms or other potentially hazardous weather conditions that can be detected with airborne thunderstorm detection equipment, required by paragraph (a) or (b) of this section, may reasonably be expected along the route to be flown, unless the airborne thunderstorm detection equipment is in satisfactory operating condition.

(d) If the airborne thunderstorm detection equipment becomes inoperative en route, the aircraft must be operated under the instructions and procedures specified for that event in the manual required by § 135.21.

(e) This section does not apply to aircraft used solely within the State of Hawaii, within the State of Alaska, within that part of Canada west of longitude 130 degrees W, between latitude 70 degrees N, and latitude 53 degrees N, or during any training, test, or ferry flight.

(f) Without regard to any other provision of this part, an alternate electrical power supply is not required for airborne thunderstorm detection equipment.

(Amdt. 135-20, Eff. 1/6/87); [(Amdt. 135-60, Eff. 2/26/96)]

§ 135.175 Airborne weather radar equipment requirements.

(a) No person may operate a large, transport category aircraft in passenger-carrying operations unless approved airborne weather radar equipment is installed in the aircraft.

(b) No person may begin a flight under IFR or night VFR conditions when current weather reports indicate that thunderstorms, or other potentially hazardous weather conditions that can be detected with airborne weather radar equipment, may reasonably be expected along the route to be

solely within the State of Hawaii, within the State of Alaska, within that part of Canada west of longitude 130 degrees W, between latitude 70 degrees N, and latitude 53 degrees N, or during any training, test, or ferry flight.

(e) Without regard to any other provision of this part, an alternate electrical power supply is not required for airborne weather radar equipment.

§ 135.177 Emergency equipment requirements for aircraft having a passenger seating configuration of more than 19 passengers.

(a) No person may operate an aircraft having a passenger seating configuration, excluding any pilot seat, of more than 19 seats unless it is equipped with the following emergency equipment:

(1) One approved first aid kit for treatment of injuries likely to occur in flight or in a minor accident, which meets the following specifications and requirements:

(i) Each first aid kit must be dust and moisture proof, and contain only materials that either meet Federal Specifications GSK-319a, as revised, or as approved by the Administrator.

(ii) Required first aid kits must be readily accessible to the cabin flight attendants.

(iii) [Except as provided in paragraph (a)(1)(iv) of this section, at time of takeoff, each first aid kit must contain at least the following or other contents approved by the Administrator:

| <i>Contents</i> | <i>Quantity</i> |
|---|-----------------|
| Adhesive bandage compressors, 1 in .. | 16 |
| Antiseptic swabs | 20 |
| Ammonia inhalents | 10 |
| Bandage compressors, 4 in | 8 |
| Triangular bandage compressors, 40 in | 5 |
| Arm splint, noninflatable | 1 |
| Leg splint, noninflatable | 1 |
| Roller bandage, 4 in | 4 |
| Adhesive tape, 1-in standard roll | 2 |

(2) A crash axe carried so as to be accessible to the crew but inaccessible to passengers during normal operations.

(3) Signs that are visible to all occupants to notify them when smoking is prohibited and when safety belts must be fastened. The signs must be constructed so that they can be turned on during any movement of the aircraft on the surface, for each takeoff or landing, and at other times considered necessary by the pilot-in-command. "No smoking" signs shall be turned on when required by § 135.127.

(4) (Reserved)

(b) Each item of equipment must be inspected regularly under inspection periods established in the operations specifications to ensure its condition for continued serviceability and immediate readiness to perform its intended emergency purposes.

(Amdt. 135-25, Eff. 4/23/88); (Amdt. 135-43, Eff. 6/30/92); (Amdt. 135-44, Eff. 10/15/92); (Amdt. 135-47, Eff. 1/12/94); [(Amdt. 135-53, Eff. 12/2/94)]

§ 135.178 Additional emergency equipment.

[No person may operate an airplane having a passenger seating configuration of more than 19 seats, unless it has the additional emergency equipment specified in paragraphs (a) through (l) of this section.

[(a) *Means for emergency evacuation.* Each passenger-carrying landplane emergency exit (other than over-the-wing) that is more than 6 feet from the ground, with the airplane on the ground and the landing gear extended, must have an approved means to assist the occupants in descending to the ground. The assisting means for a floor-level emergency exit must meet the requirements of § 25.809(f)(1) of this chapter in effect on April 30, 1972, except that, for any airplane for which the application for the type certificate was filed after that date, it must meet the requirements under which the airplane was type certificated. An assisting means that deploys automatically must be armed during taxiing, takeoffs, and landings; however, the Administrator may grant a deviation from the

36 occupants, including crewmembers, and fewer than five exits authorized for passenger use.

[(b) *Interior emergency exit marking.* The following must be complied with for each passenger-carrying airplane:

[(1) Each passenger emergency exit, its means of access, and its means of opening must be conspicuously marked. The identity and location of each passenger emergency exit must be recognizable from a distance equal to the width of the cabin. The location of each passenger emergency exit must be indicated by a sign visible to occupants approaching along the main passenger aisle. There must be a locating sign—

[(i) Above the aisle near each over-the-wing passenger emergency exit, or at another ceiling location if it is more practical because of low headroom;

[(ii) Next to each floor level passenger emergency exit, except that one sign may serve two such exits if they both can be seen readily from that sign; and

[(iii) On each bulkhead or divider that prevents fore and aft vision along the passenger cabin, to indicate emergency exits beyond and obscured by it, except that if this is not possible, the sign may be placed at another appropriate location.

[(2) Each passenger emergency exit marking and each locating sign must meet the following:

[(i) For an airplane for which the application for the type certificate was filed prior to May 1, 1972, each passenger emergency exit marking and each locating sign must be manufactured to meet the requirements of § 25.812(b) of this chapter in effect on April 30, 1972. On these airplanes, no sign may continue to be used if its luminescence (brightness) decreases to below 100 microlamberts. The colors may be reversed if it increases the emergency illumination of the passenger compartment. However, the Administrator may authorize deviation from the 2-inch background requirements if he finds that special circumstances exist that make compliance imprac-

no sign may continue to be used if its luminescence (brightness) decreases to below 250 microlamberts.

[(c) *Lighting for interior emergency exit markings.* Each passenger-carrying airplane must have an emergency lighting system, independent of the main lighting system; however, sources of general cabin illumination may be common to both the emergency and the main lighting systems if the power supply to the emergency lighting system is independent of the power supply to the main lighting system. The emergency lighting system must—

[(1) Illuminate each passenger exit marking and locating sign;

[(2) Provide enough general lighting in the passenger cabin so that the average illumination when measured at 40-inch intervals at seat arm-rest height, on the centerline of the main passenger aisle, is at least 0.05 foot-candles; and

[(3) For airplanes type certificated after January 1, 1958, include floor proximity emergency escape path marking which meets the requirements of § 25.812(e) of this chapter in effect on November 26, 1984.

[(d) *Emergency light operation.* Except for lights forming part of emergency lighting subsystems provided in compliance with § 25.812(h) of this chapter (as prescribed in paragraph (h) of this section) that serve no more than one assist means, are independent of the airplane's main emergency lighting systems, and are automatically activated when the assist means is deployed, each light required by paragraphs (c) and (h) of this section must:

[(1) Be operable manually both from the flightcrew station and from a point in the passenger compartment that is readily accessible to a normal flight attendant seat;

[(2) Have a means to prevent inadvertent operation of the manual controls;

[(3) When armed or turned on at either station, remain lighted or become lighted upon interruption of the airplane's normal electric power;

[(4) Be armed or turned on during taxiing, takeoff, and landing. In showing compliance with

which the application for the type certificate was filed prior to May 1, 1972, the location of each passenger emergency exit operating handle, and instructions for opening the exit, must be shown by a marking on or near the exit that is readable from a distance of 30 inches. In addition, for each Type I and Type II emergency exit with a locking mechanism released by rotary motion of the handle, the instructions for opening must be shown by—

[(i) A red arrow with a shaft at least three-fourths inch wide and a head twice the width of the shaft, extending along at least 70° of arc at a radius approximately equal to three-fourths of the handle length; and

[(ii) The word “open” in red letters 1 inch high placed horizontally near the head of the arrow.

[(2) For a passenger-carrying airplane for which the application for the type certificate was filed on or after May 1, 1972, the location of each passenger emergency exit operating handle and instructions for opening the exit must be shown in accordance with the requirements under which the airplane was type certificated. On these airplanes, no operating handle or operating handle cover may continue to be used if its luminescence (brightness) decreases to below 100 microlamberts.

[(f) *Emergency exit access.* Access to emergency exits must be provided as follows for each passenger-carrying airplane:

[(1) Each passageway between individual passenger areas, or leading to a Type I or Type II emergency exit, must be unobstructed and at least 20 inches wide.

[(2) There must be enough space next to each Type I or Type II emergency exit to allow a crewmember to assist in the evacuation of passengers without reducing the unobstructed width of the passageway below that required in paragraph (f)(1) of this section; however, the Administrator may authorize deviation from this requirement for an airplane certificated under the provisions of part 4b of the Civil Air Regulations

airplane type certificated after January 1, 1958, there must be placards installed in accordance with 25.813(c)(3) of this chapter for each Type III exit after December 3, 1992.

[(4) If it is necessary to pass through a passageway between passenger compartments to reach any required emergency exit from any seat in the passenger cabin, the passageway must not be obstructed. Curtains may, however, be used if they allow free entry through the passageway.

[(5) No door may be installed in any partition between passenger compartments.

[(6) If it is necessary to pass through a doorway separating the passenger cabin from other areas to reach a required emergency exit from any passenger seat, the door must have a means to latch it in the open position, and the door must be latched open during each takeoff and landing. The latching means must be able to withstand the loads imposed upon it when the door is subjected to the ultimate inertia forces, relative to the surrounding structure, listed in § 25.561(b) of this chapter.

[(g) *Exterior exit markings.* Each passenger emergency exit and the means of opening that exit from the outside must be marked on the outside of the airplane. There must be a 2-inch colored band outlining each passenger emergency exit on the side of the fuselage. Each outside marking, including the band, must be readily distinguishable from the surrounding fuselage area by contrast in color. The markings must comply with the following:

[(1) If the reflectance of the darker color is 15 percent or less, the reflectance of the lighter color must be at least 45 percent.

[(2) If the reflectance of the darker color is greater than 15 percent, at least a 30 percent difference between its reflectance and the reflectance of the lighter color must be provided.

[(3) Exits that are not in the side of the fuselage must have the external means of opening and applicable instructions marked conspicuously in red or, if red is inconspicuous against the background color, in bright chrome yellow and, when the opening means for such an exit is

following requirements:

[(i) For an airplane for which the application for the type certificate was filed prior to May 1, 1972, the requirements of § 25.812 (f) and (g) of this chapter in effect on April 30, 1972.

[(ii) For an airplane for which the application for the type certificate was filed on or after May 1, 1972, the exterior emergency lighting requirements under which the airplane was type certificated.

[(2) Each passenger-carrying airplane must be equipped with a slip-resistant escape route that meets the following requirements:

[(i) For an airplane for which the application for the type certificate was filed prior to May 1, 1972, the requirements of § 25.803(e) of this chapter in effect on April 30, 1972.

[(ii) For an airplane for which the application for the type certificate was filed on or after May 1, 1972, the slip-resistant escape route requirements under which the airplane was type certificated.

[(i) *Floor level exits.* Each floor level door or exit in the side of the fuselage (other than those leading into a cargo or baggage compartment that is not accessible from the passenger cabin) that is 44 or more inches high and 20 or more inches wide, but not wider than 46 inches, each passenger ventral exit (except the ventral exits on Martin 404 and Convair 240 airplanes), and each tail cone exit, must meet the requirements of this section for floor level emergency exits. However, the Administrator may grant a deviation from this paragraph if he finds that circumstances make full compliance impractical and that an acceptable level of safety has been achieved.

[(j) *Additional emergency exits.* Approved emergency exits in the passenger compartments that are in excess of the minimum number of required emergency exits must meet all of the applicable provisions of this section, except paragraphs (f)(1), (2), and (3) of this section, and must be readily accessible.

structed so that it cannot be opened during flight.

[(1) *Portable lights.* No person may operate a passenger-carrying airplane unless it is equipped with flashlight stowage provisions accessible from each flight attendant seat.]

[(Amdt. 135-43, Eff. 6/3/92)]

§ 135.179 Inoperable instruments and equipment.

(a) No person may take off an aircraft with inoperable instruments or equipment installed unless the following conditions are met:

(1) An approved Minimum Equipment List exists for that aircraft.

(2) The [certificate-holding district office] has issued the certificate holder operations specifications authorizing operations in accordance with an approved Minimum Equipment List. The flight crew shall have direct access at all times prior to flight to all of the information contained in the approved Minimum Equipment List through printed or other means approved by the Administrator in the certificate holders operations specifications. An approved Minimum Equipment List, as authorized by the operations specifications, constitutes an approved change to the type design without requiring recertification.

(3) The approved Minimum Equipment List must:

(i) Be prepared in accordance with the limitations specified in paragraph (b) of this section.

(ii) Provide for the operation of the aircraft with certain instruments and equipment in an inoperable condition.

(4) Records identifying the inoperable instruments and equipment and the information required by (a)(3)(ii) of this section must be available to the pilot.

(5) The aircraft is operated under all applicable conditions and limitations contained in the Minimum Equipment List and the operations specifications authorizing use of the Minimum Equipment List.

airworthiness directive to be in operable condition unless the airworthiness directive provides otherwise.

(3) Instruments and equipment required for specific operations by this part.

(c) Notwithstanding paragraphs (b)(1) and (b)(3) of this section, an aircraft with inoperable instruments or equipment may be operated under a special flight permit under §§ 21.197 and 21.199 of this chapter.

(Amdt. 135-39, Eff. 6/20/91); [(Amdt. 135-60, Eff. 2/26/96)]

§ 135.180 Traffic alert and collision avoidance system.

(a) [Unless otherwise authorized by the Administrator, after December 31, 1995, no person may operate a turbine-powered airplane that has a passenger seat configuration, excluding any pilot seat, of 10 to 30 seats unless it is equipped with an approved traffic alert and collision avoidance system. If a TCAS II system is installed, it must be capable of coordinating with TCAS units that meet TSO C-119.]

(b) The airplane flight manual required by § 135.21 of this part shall contain the following information on the TCAS I system required by this section:

(1) Appropriate procedures for—

(i) The use of the equipment; and

(ii) Proper flightcrew action with respect to the equipment operation.

(2) An outline of all input sources that must be operating for the TCAS to function properly.

Docket No. 25355 (54 FR 951) Eff. 1/10/89;

(Amdt. 135-30, Eff. 2/9/89); [(Amdt. 135-54, Eff. 12/29/94)]

§ 135.181 Performance requirements: Aircraft operated over-the-top or in IFR conditions.

(a) Except as provided in paragraphs (b) and (c) of this section, no person may—

(b) Notwithstanding the restrictions in paragraph (a)(2) of this section, multiengine helicopters carrying passengers offshore may conduct such operations in over-the-top or in IFR conditions at a weight that will allow the helicopter to climb at least 50 feet per minute with the critical engine inoperative when operating at the MEA of the route to be flown or 1,500 feet MSL, whichever is higher.

(c) Without regard to paragraph (a) of this section—

(1) If the latest weather reports or forecasts, or any combination of them, indicate that the weather along the planned route (including take-off and landing) allows flight under VFR under the ceiling (if a ceiling exists) and that the weather is forecast to remain so until at least 1 hour after the estimated time of arrival at the destination, a person may operate an aircraft over-the-top; or

(2) If the latest weather reports or forecasts, or any combination of them, indicate that the weather along the planned route allows flight under VFR under the ceiling (if a ceiling exists) beginning at a point no more than 15 minutes flying time at normal cruise speed from the departure airport, a person may—

(i) Take off from the departure airport in IFR conditions “and fly in IFR conditions to a point no more than 15 minutes flying time at normal cruise speed from that airport;

(ii) Operate an aircraft in IFR conditions if unforecast weather conditions are encountered while en route on a flight planned to be conducted under VFR; and

(iii) Make an IFR approach at the destination airport if unforecast weather conditions are encountered at the airport that do not allow an approach to be completed under VFR.

(d) Without regard to paragraph (a) of this section, a person may operate an aircraft over-the-top under conditions allowing—

(1) For multiengine aircraft, descent or continuance of the flight under VFR if its critical engine fails; or

(a) It is operated at an altitude that allows it to reach land in the case of engine failure;

(b) It is necessary for takeoff or landing;

(c) It is a multiengine aircraft operated at a weight that will allow it to climb, with the critical engine inoperative, at least 50 feet a minute, at an altitude of 1,000 feet above the surface; or

(d) It is a helicopter equipped with helicopter flotation devices.

to—

(1) Aircraft issued an original airworthiness certificate within the preceding 36 calendar months; and

(2) Aircraft operated under a weight and balance system approved in the operations specifications of the certificate holder.

This subpart prescribes the operating limitations for VFR/IFR flight operations and associated weather requirements for operations under this part.

§ 135.203 VFR: Minimum altitudes.

Except when necessary for takeoff and landing, no person may operate under VFR—

(a) An airplane—

(1) During the day, below 500 feet above the surface or less than 500 horizontally from any obstacle; or

(2) At night, at an altitude less than 1,000 feet above the highest obstacle within a horizontal distance of 5 miles from the course intended to be flown or, in designated mountainous terrain, less than 2,000 feet above the highest obstacle within a horizontal distance of 5 miles from the course intended to be flown; or

(b) A helicopter over a congested area at an altitude less than 300 feet above the surface.

§ 135.205 VFR: Visibility requirements.

(a) No person may operate an airplane under VFR in uncontrolled airspace when the ceiling is less than 1,000 feet unless flight visibility is at least 2 miles.

(b) **【**No person may operate a helicopter under VFR in Class G airspace at an altitude of 1,200 feet or less above the surface or within the lateral boundaries of the surface areas of Class B, Class C, Class D, or Class E airspace designated for an airport unless the visibility is at least—**】**

(1) During the day— $\frac{1}{2}$ mile; or

(2) At night—1 mile.

【(Amdt. 135-41, Eff. 9/16/93)】

§ 135.207 VFR: Helicopter surface reference requirements.

No person may operate a helicopter under VFR unless that person has visual surface reference or,

§ 135.209 VFR: Fuel supply.

(a) No person may begin a flight operation in an airplane under VFR unless, considering wind and forecast weather conditions, it has enough fuel to fly to the first point of intended landing and, assuming normal cruising fuel consumption—

(1) During the day, to fly after that for at least 30 minutes; or

(2) At night, to fly after that for at least 45 minutes.

(b) No person may begin a flight operation in a helicopter under VFR unless, considering wind and forecast weather conditions, it has enough fuel to fly to the first point of intended landing and, assuming normal cruising fuel consumption, to fly after that for at least 20 minutes.

§ 135.211 VFR: Over-the-top carrying passengers: Operating limitations.

Subject to any additional limitations in § 135.181, no person may operate an aircraft under VFR over-the-top carrying passengers, unless—

(a) Weather reports or forecasts, or any combination of them, indicate that the weather at the intended point of termination of over-the-top flight—

(1) Allows descent to beneath the ceiling under VFR and is forecast to remain so until at least 1 hour after the estimated time of arrival at that point; or

(2) Allows an IFR approach and landing with flight clear of the clouds until reaching the prescribed initial approach altitude over the final approach facility, unless the approach is made with the use of radar under § 91.175(f) of this chapter; or

(b) It is operated under conditions allowing—

(1) For multiengine aircraft, descent or continuation of the flight under VFR if its critical engine fails; or

National Weather Service, a source approved by the U.S. National Weather Service, or a source approved by the Administrator. However, for operations under VFR, the pilot-in-command may, if such a report is not available, use weather information based on that pilot's own observations or on those of other persons competent to supply appropriate observations.

(b) For the purposes of paragraph (a) of this section, weather observations made and furnished to pilots to conduct IFR operations at an airport must be taken at the airport where those IFR operations are conducted, unless the Administrator issues operations specifications allowing the use of weather observations taken at a location not at the airport where the IFR operations are conducted. The Administrator issues such operations specifications when, after investigation by the U.S. National Weather Service and the [certificate-holding district office,] it is found that the standards of safety for that operation would allow the deviation from this paragraph for a particular operation for which an [air carrier operating certificate or operating certificate] has been issued.

[(Amdt. 135-60, Eff. 2/26/96)]

§ 135.215 IFR: Operating limitations.

(a) Except as provided in paragraphs (b), (c) and (d) of this section, no person may operate an aircraft under IFR outside of controlled airspace or at any airport that does not have an approved standard instrument approach procedure.

(b) The Administrator may issue operations specifications to the certificate holder to allow it to operate under IFR over routes outside controlled airspace if—

(1) The certificate holder shows the Administrator that the flight crew is able to navigate, without visual reference to the ground, over an intended track without deviating more than 5 degrees or 5 miles, whichever is less, from that track; and

(2) The Administrator determines that the proposed operations can be conducted safely.

approved missed approach procedure; or

(3) Make an IFR departure from an airport having an approved instrument approach procedure.

(d) The Administrator may issue operations specifications to the certificate holder to allow it to depart at an airport that does not have an approved standard instrument approach procedure when the Administrator determines that it is necessary to make an IFR departure from that airport and that the proposed operations can be conducted safely. The approval to operate at that airport does not include an approval to make an IFR approach to that airport.

§ 135.217 IFR: Takeoff limitations.

No person may takeoff an aircraft under IFR from an airport where weather conditions are at or above take off minimums but are below authorized IFR landing minimums unless there is an alternate airport within 1 hour's flying time (at normal cruising speed, in still air) of the airport of departure.

§ 135.219 IFR: Destination airport weather minimums.

No person may take off an aircraft under IFR or being an IFR or over-the-top operation unless the latest weather reports or forecasts, or any combination of them, indicate that weather conditions at the estimated time of arrival at the next airport of intended landing will be at or above authorized IFR landing minimums.

§ 135.221 IFR: Alternate airport weather minimums.

No person may designate an alternate airport unless the weather reports or forecasts, or any combination of them, indicate that the weather conditions will be at or above authorized alternate airport landing minimums for that airport at the estimated time of arrival.

intended landing,
(2) Fly from that airport to the alternate airport; and

(3) Fly after that for 45 minutes at normal cruising speed, or helicopters, fly after that for 30 minutes at normal cruising speed.

(b) Paragraph (a)(2) of this section does not apply if part 97 of this chapter prescribes a standard instrument approach procedure for the first airport of intended landing and, for at least one hour before and after the estimated time of arrival, the appropriate weather reports or forecasts, or any combination of them, indicate that—

(1) The ceiling will be at least 1,500 feet above the lowest circling approach MDA; or

(2) If a circling instrument approach is not authorized for the airport, the ceiling will be at least 1,500 feet above the lowest published minimum or 2,000 feet above the airport elevation, whichever is higher; and

(3) Visibility for that airport is forecast to be at least three miles, or two miles more than the lowest applicable visibility minimums, whichever is the greater, for the instrument approach procedure to be used at the destination airport.

(Amdt. 135-20, Eff. 1/6/87)

§ 135.225 IFR: Takeoff, approach and landing minimums.

(a) No pilot may begin instrument approach procedure to an airport unless—

(1) That airport has a weather reporting facility operated by the U.S. National Weather Service, a source approved by U.S. National Weather Service, or a source approved by the Administrator; and

(2) The latest weather report issued by that weather reporting facility indicates that weather conditions are at or above the authorized IFR landing minimums for that airport.

(b) No pilot may begin the final approach segment of an instrument approach procedure to an airport unless the latest weather reported by the facility described in paragraph (a)(1) of this section indicates that weather conditions are at or above

(2) On an ASR or PAR final approach and has been turned over to the final approach controller; or

(3) On a final approach using a VOR, NDB, or comparable approach procedure; and the aircraft—

(i) Has passed the appropriate facility or final approach fix; or

(ii) Where a final approach fix is not specified, has completed the procedure turn and is established inbound toward the airport on the final approach course within the distance prescribed in the procedure; the approach may be continued and a landing made if the pilot finds, upon reaching the authorized MDA or DH, that actual weather conditions are at least equal to the minimums prescribed for the procedure.

(d) The MDA or DH and visibility landing minimums prescribed in part 97 of this chapter or in the operator's operations specifications are increased by 100 feet and ½ mile respectively, but not to exceed the ceiling and visibility minimums for that airport when used as an alternate airport, for each pilot-in-command of a turbine-powered airplane who has not served at least 100 hours as pilot-in-command in that type of airplane.

(e) Each pilot making an IFR takeoff or approach and landing at a military or foreign airport shall comply with applicable instrument approach procedures and weather minimums prescribed by the authority having jurisdiction over the airport. In addition, no pilot may, at that airport—

(1) Take off under IFR when the visibility is less than 1 mile; or

(2) Make an instrument approach when the visibility is less than ½ mile.

(f) If takeoff minimums are specified in part 97 of this chapter for the takeoff airport, no pilot may take off an aircraft under IFR when the weather conditions reported by the facility described in paragraph (a)(1) of this section are less than the takeoff minimums specified for the takeoff airport in part 97 or in the certificate holder's operations specifications.

approach procedures are authorized, a pilot may take off an aircraft under IFR when the weather conditions reported by the facility described in paragraph (a)(1) of this section are equal to or better than the lowest straight-in landing minimums, unless otherwise restricted, if—

(1) The wind direction and velocity at the time of takeoff are such that a straight-in instrument approach can be made to the runway served by the instrument approach;

(2) The associated ground facilities upon which the landing minimums are predicated and the related airborne equipment are in the normal operation; and

(3) The certificate holder has been approved for such operations.

§ 135.227 Icing conditions: Operating limitations.

(a) No pilot may take off an aircraft that has frost, ice, or snow adhering to any rotor blade, propeller, windshield, wing, stabilizing or control surface, to a powerplant installation, or to an airspeed, altimeter, rate of climb, or flight attitude instrument system, except under the following conditions:

(1) Takeoffs may be made with frost adhering to the wings, or stabilizing or control surfaces, if the frost has been polished to make it smooth.

(2) Takeoffs may be made with frost under the wing in the area of the fuel tanks if authorized by the Administrator.

(b) No certificate holder may authorize an airplane to take off and no pilot may take off an airplane any time conditions are such that frost, ice, or snow may reasonably be expected to adhere to the airplane unless the pilot has completed all applicable training as required by § 135.341 and unless one of the following requirements is met:

(1) A pretakeoff contamination check, that has been established by the certificate holder and approved by the Administrator for the specific airplane type, has been completed within 5 minutes prior to beginning takeoff. A pretakeoff contamination check is a check to make sure

plies with that program.

(c) Except for an airplane that has ice protection provisions that meet § 34 of appendix A, or those for transport category airplane type certificate, no pilot may fly—

(1) Under IFR into known or forecast light or moderate icing conditions; or

(2) Under VFR into known light or moderate icing conditions; unless the aircraft has functioning deicing or anti-icing equipment protecting each rotor blade, propeller, windshield, wing, stabilizing or control surface, and each airspeed, altimeter, rate of climb, or flight attitude instrument system.;

(d) No pilot may fly a helicopter under IFR into known or forecast icing conditions or under VFR into known icing conditions unless it has been type certificated and appropriately equipped for operations in icing conditions.

(e) Except for an airplane that has ice protection provisions that meet § 34 of appendix A, or those for transport category airplane type certification, no pilot may fly an aircraft into known or forecast severe icing conditions.

(f) If current weather reports and briefing information relied upon by the pilot-in-command indicate that the forecast icing condition that would otherwise prohibit the flight will not be encountered during the flight because of changed weather conditions since the forecast, the restrictions in paragraphs [(c), (d), and (e)] of this section based on forecast conditions do not apply.

(Amdt. 135–20, Eff. 1/6/87); (Amdt. 135–46, Eff. 1/31/94); [(Amdt. 135–60, Eff. 2/26/96)]

§ 135.229 Airport requirements.

(a) No certificate holder may use any airport unless it is adequate for the proposed operation, considering such items as size, surface, obstructions, and lighting.

(b) No pilot of an aircraft carrying passengers at night may take off from, or land on, an airport unless—

(1) That pilot has determined the wind direction from an illuminated wind direction indicator

operations under this part.

[(Amdt. 135-57, Eff. 3/19/96)]

§ 135.243 Pilot-in-command qualifications.

(a) [No certificate holder may use a person, nor may any person serve, as pilot-in-command in passenger-carrying operations—

(1) Of a turbojet airplane, of an airplane having a passenger-seat configuration, excluding each crewmember seat, of 10 seats or more, or of a multiengine airplane in a commuter operation as defined in part 119 of this chapter, unless that person holds an airline transport pilot certificate with appropriate category and class ratings and, if required, an appropriate type rating for that airplane.

(2) Of a helicopter in a scheduled interstate air transportation operation by an air carrier within the 48 contiguous states unless that person holds an airline transport pilot certificate, appropriate type ratings, and an instrument rating.]

(b) Except as provided in paragraph (a) of this section, no certificate holder may use a person, nor may any person serve, as pilot-in-command of an aircraft under VFR unless that person—

(1) Holds at least a commercial pilot certificate with appropriate category and class ratings and, if required, an appropriate type rating for that aircraft; and

(2) Has had at least 500 hours of flight time as a pilot, including at least 100 hours of cross-country flight time, at least 25 hours of which were at night; and

(3) For an airplane, holds an instrument rating or an airline transport pilot certificate with an airplane category rating; or

(4) For helicopter operations conducted VFR over-the-top, holds a helicopter instrument rating, or an airline transport pilot certificate with a category and class rating for that aircraft, not limited to VFR.

an aircraft under IFR unless that person—

(1) Holds at least a commercial pilot certificate with appropriate category and class ratings and, if required, an appropriate type rating for that aircraft; and

(2) Has had at least 1,200 hours of flight time as a pilot, including 500 hours of cross-country flight time, 100 hours of night flight time, and 75 hours of actual or simulated instrument time at least 50 hours of which were in actual flight; and

(3) For an airplane, holds an instrument rating or an airline transport pilot certificate with an airplane category rating; or

(4) For a helicopter, holds a helicopter instrument rating, or an airline transport pilot certificate with a category and class rating for the aircraft, not limited to VFR.

(d) Paragraph (b)(3) of this section does not apply when—

(1) The aircraft used is a single reciprocating-engine-powered airplane;

(2) The certificate holder does not conduct any operation pursuant to a published flight schedule which specifies five or more round trips a week between two or more points and places between which the round trips are performed, and does not transport mail by air under a contract or contracts with the United States Postal Service having total amount estimated at the beginning of any semiannual reporting period (January 1–June 30; July 1–December 31) to be in excess of \$20,000 over the 12 months commencing with the beginning of the reporting period;

(3) The area, as specified in the certificate holder's operations specifications, is an isolated area, as determined by the Flight Standards district office, if it is shown that—

(i) The primary means of navigation in the area is by pilotage, since radio navigational aids are largely ineffective; and

(ii) The primary means of transportation in the area is by air;

and visibility of not less than 5 statute miles, except that if weather reports and forecasts are not available, the pilot-in-command may use that pilot's observations or those of other persons competent to supply weather observations if those observations indicate the flight may be conducted under VFR with the ceiling and visibility required in this paragraph;

(6) The distance of each flight from the certificate holder's base of operation to destination does not exceed 250 nautical miles for a pilot who holds a commercial pilot certificate with an airplane rating without an instrument rating, provided the pilot's certificate does not contain any limitation to the contrary; and

(7) The areas to be flown are approved by the certificate-holding FAA Flight Standards district office and are listed in the certificate holder's operations specifications.

(Amdt. 135-15, Eff. 6/11/81); [(Amdt. 135-58, Eff. 1/19/96)]

§ 135.244 Operating experience.

(a) No certificate holder may use any person, nor may any person serve, as a pilot-in-command of an aircraft operated [in a commuter operation, as defined in part 119 of this chapter], unless that person has completed, prior to designation as pilot-in-command, on that make and basic model aircraft and in that crewmember position, the following operating experience in each make and basic model of aircraft to be flown:

- (1) Aircraft, single engine—10 hours.
- (2) Aircraft multiengine, reciprocating engine-powered—15 hours.
- (3) Aircraft multiengine, turbine engine-powered—20 hours.
- (4) Airplane, turbojet-powered—25 hours.

(b) In acquiring the operating experience, each person must comply with the following:

(1) The operating experience must be acquired after satisfactory completion of the appropriate ground and flight training for the aircraft and crewmember position. Approved provisions for

ment.

(3) Each person must acquire the operating experience while performing the duties of a pilot-in-command under the supervision of a qualified check pilot.

(4) The hours of operating experience may be reduced to not less than 50 percent of the hours required by this section by the substitution of one additional takeoff and landing for each hour of flight.

Docket No. 20011 (45 FR 7541) Eff. 2/4/80;

(Amdt. 135-3, Eff. 3/1/80); (Amdt. 135-9, Eff. 12/1/80); [(Amdt. 135-58, Eff. 1/19/96)]

§ 135.245 Second-in-command qualifications.

(a) Except as provided in paragraph (b), no certificate holder may use any person, nor may any person serve, as second-in-command of an aircraft unless that person holds at least a commercial pilot certificate with appropriate category and class ratings and an instrument rating. For flight under IFR, that person must meet the recent instrument experience requirements of part 61 of this chapter.

(b) A second-in-command of a helicopter operated under VFR, other than over-the-top, must have at least a commercial pilot certificate with an appropriate aircraft category and class rating.

(Amdt. 135-1, Eff. 5/7/79)

§ 135.247 Pilot qualifications: Recent experience.

(a) No certificate holder may use any person, nor may any person serve, as pilot-in-command of an aircraft carrying passengers unless, within the preceding 90 days, that person has—

(1) Made three takeoffs and three landings as the sole manipulator of the flight controls in an aircraft of the same category and class and, if a type rating is required, of the same type in which that person is to serve; or

(2) For operation during the period beginning 1 hour after sunset and ending 1 hour before sunrise (as published in the Air Almanac), made

tion, if the aircraft is a tailwheel airplane, each takeoff must be made in a tailwheel airplane and each landing must be made to a full stop in a tailwheel airplane.

§ 135.249 Use of prohibited drugs.

(a) This section applies to persons who perform a function listed in appendix I to part 121 of this chapter for a certificate holder or an operator. For the purpose of this section, a person who performs such a function pursuant to a contract with the certificate holder or the operator is considered to be performing that function for the certificate holder or the operator.

(b) No certificate holder or operator may knowingly use any person to perform, nor may any person perform for a certificate holder or an operator, either directly or by contract, any function listed in appendix I to part 121 of this chapter while that person has a prohibited drug, as defined in that appendix, in his or her system.

(c) [No certificate holder or operator shall knowingly use any person to perform, nor shall any person perform for a certificate holder or operator, either directly or by contract, any safety-sensitive function if the person has a verified positive drug test result on or has refused to submit to a drug test required by appendix I to part 121 of this chapter and the person has not met the requirements of appendix I to part 121 of this chapter for returning to the performance of safety-sensitive duties.] Docket No. 25148 (54 FR 47061) Eff. 11/21/88; (Amdt. 135-28, Eff. 12/21/88); [(Amdt. 135-51, Eff. 9/19/94)]

§ 135.251 Testing for prohibited drugs.

(a) Each certificate holder or operator shall test each of its employees who performs a function listed in appendix I to part 121 of this chapter in accordance with that appendix.

(b) No certificate holder or operator may use any contractor to perform a function listed in appendix I to part 121 of this chapter unless that contractor tests each employee performing such a function

of this chapter for a certificate holder or operator (covered employees). For the purpose of this section, a person who meets the definition of covered employee in appendix J is considered to be performing the function for the certificate holder or operator.

(b) *Alcohol concentration.* No covered employee shall report for duty or remain on duty requiring the performance of safety-sensitive functions while having an alcohol concentration of 0.04 or greater. No certificate holder or operator having actual knowledge that an employee has an alcohol concentration of 0.04 or greater shall permit the employee to perform or continue to perform safety-sensitive functions.

(c) *On-duty use.* No covered employee shall use alcohol while performing safety-sensitive functions. No certificate holder or operator having actual knowledge that a covered employee is using alcohol while performing safety-sensitive functions shall permit the employee to perform or continue to perform safety-sensitive functions.

(d) *Pre-duty use.*

(1) No covered employee shall perform flight crewmember or flight attendant duties within 8 hours after using alcohol. No certificate holder or operator having actual knowledge that such an employee has used alcohol within 8 hours shall permit the employee to perform or continue to perform the specified duties.

(2) No covered employee shall perform safety-sensitive duties other than those specified in paragraph (e)(1) of this section within 4 hours after using alcohol. No certificate holder or operator having actual knowledge that such an employee has used alcohol within 4 hours shall permit the employee to perform or continue to perform safety-sensitive functions.

(e) *Use following an accident.* No covered employee who has actual knowledge of an accident involving an aircraft for which he or she performed a safety-sensitive function at or near the time of the accident shall use alcohol for 8 hours following the accident, unless he or she has been given a post-accident test under appendix J of part 121 of this chapter, or the employer has determined that

to perform safety-sensitive functions.】
【(Amdt. 135—48, Eff. 3/17/94)】

unless such person is subject to testing for alcohol
misuse in accordance with the provisions of appen-
dix J.】
【(Amdt. 135—48, Eff. 3/17/94)】

§ 135.261 Applicability.

【Sections 135.263 through 135.273 of this part prescribe flight time limitations, duty period limitations, and rest requirements for operations conducted under this part as follows:】

(a) Section 135.263 applies to all operations under this subpart.

(b) Section 135.265 applies to:

(1) Scheduled passenger-carrying operations except those conducted solely within the state of Alaska. “Scheduled passenger-carrying operations” means passenger-carrying operations that are conducted in accordance with a published schedule which covers at least five round trips per week on at least one route between two or more points, includes dates or times (or both), and is openly advertised or otherwise made readily available to the general public, and

(2) Any other operation under this part, if the operator elects to comply with § 135.265 and obtains an appropriate operations specification amendment.

(c) Sections 135.267 and 135.269 apply to any operation that is not a scheduled passenger-carrying operation and to any operation conducted solely within the State of Alaska, unless the operator elects to comply with § 135.265 as authorized under paragraph (b)(2) of this section.

(d) Section 135.271 contains special daily flight time limits for operations conducted under the helicopter emergency medical evacuation service (HEMES).

【(e) Section 135.273 prescribes duty period limitations and rest requirements for flight attendants in all operations conducted under this part.】

【(Amdt. 135-52, Eff. 9/19/94)】

(a) A certificate holder may assign a flight crewmember and a flight crewmember may accept an assignment for flight time only when the applicable requirements of §§ 135.263 through 135.271 are met.

(b) No certificate holder may assign any flight crewmember to any duty with the certificate holder during any required rest period.

(c) Time spent in transportation, not local in character, that a certificate holder requires of a flight crewmember and provides to transport the crewmember to an airport at which he is to serve on a flight as a crewmember, or from an airport at which he was relieved from duty to return to his home station, is not considered part of a rest period.

(d) A flight crewmember is not considered to be assigned flight time in excess of flight time limitations if the flights to which he is assigned normally terminate within the limitations, but due to circumstances beyond the control of the certificate holder or flight crewmember (such as adverse weather conditions), are not at the time of departure expected to reach their destination within the planned flight time.

§ 135.265**Flight time limitations and rest requirements: Scheduled operations.**

(a) No certificate holder may schedule any flight crewmember, and no flight crewmember may accept an assignment, for flight time in scheduled operations or in other commercial flying if that crewmember's total flight time in all commercial flying will exceed—

(1) 1,200 hours in any calendar year.

(2) 120 hours in any calendar month.

(3) 34 hours in any 7 consecutive days.

(4) 8 hours during any 24 consecutive hours for a flight crew consisting of one pilot.

period during that 24 hours or at least the following:

(1) 9 consecutive hours of rest for less than 8 hours of scheduled flight time.

(2) 10 consecutive hours of rest for 8 or more but less than 9 hours of scheduled flight time.

(3) 11 consecutive hours of rest for 9 or more hours of scheduled flight time.

(c) A certificate holder may schedule a flight crewmember for less than the rest required in paragraph (b) of this section or may reduce a scheduled rest under the following conditions:

(1) A rest required under paragraph (b)(1) of this section may be scheduled for or reduced to a minimum of 8 hours if the flight crewmember is given a rest period of at least 10 hours that must begin no later than 24 hours after the commencement of the reduced rest period.

(2) A rest required under paragraph (b)(2) of this section may be scheduled for or reduced to a minimum of 8 hours if the flight crewmember is given a rest period of at least 11 hours that must begin no later than 24 hours after the commencement of the reduced rest period.

(3) A rest required under paragraph (b)(3) of this section may be scheduled for or reduced to a minimum of 9 hours if the flight crewmember is given a rest period of at least 12 hours that must begin no later than 24 hours after the commencement of the reduced rest period.

(d) Each certificate holder shall relieve each flight crewmember engaged in scheduled air transportation from all further duty for at least 24 consecutive hours during any 7 consecutive days.

§ 135.267 Flight time limitations and rest requirements: Unscheduled one- and two-pilot crews.

(a) No certificate holder may assign any flight crewmember, and no flight crewmember may accept an assignment, for flight time as a member of a

any other commercial flying by that flight crewmember may not exceed—

(1) 8 hours for a flight crew consisting of one pilot; or

(2) 10 hours for a flight crew consisting of two pilots qualified under this part for the operation being conducted.

(c) A flight crewmember's flight time may exceed the flight time limits of paragraph (b) of this section if the assigned flight time occurs during a regularly assigned duty period of no more than 14 hours and—

(1) If this duty period is immediately preceded by and followed by a required rest period of at least 10 consecutive hours of rest;

(2) If flight time is assigned during this period, that total flight time when added to any other commercial flying by the flight crewmember may not exceed—

(i) 8 hours for a flight crew consisting of one pilot; or

(ii) 10 hours for a flight crew consisting of two pilots; and

(3) If the combined duty and rest periods equal 24 hours.

(d) Each assignment under paragraph (b) of this section must provide for at least 10 consecutive hours of rest during the 24-hour period that precedes the planned completion time of the assignment.

(e) When a flight crewmember has exceeded the daily flight time limitations in this section, because of circumstances beyond the control of the certificate holder or flight crewmember (such as adverse weather conditions), that flight crewmember must have a rest period before being assigned or accepting an assignment for flight time of at least—

(1) 11 consecutive hours of rest if the flight time limitation is exceeded by not more than 30 minutes;

(2) 12 consecutive hours of rest if the flight time limitation is exceeded by more than 30 minutes, but not more than 60 minutes; and

§ 135.269

Flight time limitations and rest requirements: Unscheduled three- and four-pilot crews.

(a) No certificate holder may assign any flight crewmember, and no flight crewmember may accept an assignment, for flight time as a member of a three- or four-pilot crew if that crewmember's total flight time in all commercial flying will exceed—

(1) 500 hours in any calendar quarter.

(2) 800 hours in any two consecutive calendar quarters.

(3) 1,400 hours in any calendar year.

(b) No certificate holder may assign any pilot to a crew of three or four pilots, unless that assignment provides—

(1) At least 10 consecutive hours of rest immediately preceding the assignment;

(2) No more than 8 hours of flight deck duty in any 24 consecutive hours;

(3) No more than 18 duty hours for a three-pilot crew or 20 duty hours for a four-pilot crew in any 24 consecutive hours;

(4) No more than 12 hours aloft for a three-pilot crew or 16 hours aloft for a four-pilot crew during the maximum duty hours specified in paragraph (b)(3) of this section;

(5) Adequate sleeping facilities on the aircraft for the relief pilot;

(6) Upon completion of the assignment, a rest period of at least 12 hours;

(7) For a three-pilot crew, a crew which consists of at least the following:

(i) A pilot-in-command (PC) who meets the applicable flight crewmember requirements of subpart E of part 135;

(ii) A PC who meets the applicable flight crewmember requirements of subpart E of part 135, except those prescribed in §§ 135.244 and 135.247; and

(iii) A second-in-command (SIC) who meets the SIC qualifications of § 135.245.

(8) For a four-pilot crew, at least three pilots who meet the conditions of paragraph (b)(7) of

(d) A certificate holder must provide each flight crewmember at least 13 rest periods of at least 24 consecutive hours each in each calendar quarter.

§ 135.271

Helicopter hospital emergency medical evacuation service (HEMES).

(a) No certificate holder may assign any flight crewmember, and no flight crewmember may accept an assignment for flight time if that crewmember's total flight time in all commercial flying will exceed—

(1) 500 hours in any calendar quarter.

(2) 800 hours in any two consecutive calendar quarters.

(3) 1,400 hours in any calendar year.

(b) No certificate holder may assign a helicopter flight crewmember, and no flight crewmember may accept an assignment, for hospital emergency medical evacuation service helicopter operations unless that assignment provides for at least 10 consecutive hours of rest immediately preceding reporting to the hospital for availability for flight time.

(c) No flight crewmember may accrue more than 8 hours of flight time during any 24-consecutive hour period of a HEMES assignment, unless an emergency medical evacuation operation is prolonged. Each flight crewmember who exceeds the daily 8 hour flight time limitation in this paragraph must be relieved of the HEMES assignment immediately upon the completion of that emergency medical operation and must be given a rest period in compliance with paragraph (h) of this section.

(d) Each flight crewmember must receive at least 8 consecutive hours of rest during any 24 consecutive hour period of a HEMES assignment. A flight crewmember must be relieved of the HEMES assignment if he or she has not or cannot receive at least 8 consecutive hours of rest during any 24 consecutive hour period of a HEMES assignment.

(e) A HEMES assignment may not exceed 72 consecutive hours at the hospital.

cate holder of—

(1) At least 12 consecutive hours for an assignment of less than 48 hours.

(2) At least 16 consecutive hours for an assignment of more than 48 hours.

(i) The certificate holder must provide each flight crewmember at least 13 rest periods of at least 24 consecutive hours each in each calendar quarter.

§ 135.273 Duty period limitations and rest time requirements.

(a) For purposes of this section—

“Calendar day” means the period of elapsed time, using Coordinated Universal Time or local time, that begins at midnight and ends 24 hours later at the next midnight.

“Duty period” means the period of elapsed time between reporting for an assignment involving flight time and release from that assignment by the certificate holder. The time is calculated using either Coordinated Universal Time or local time to reflect the total elapsed time.

“Flight attendant” means an individual, other than a flight crewmember, who is assigned by the certificate holder, in accordance with the required minimum crew complement under the certificate holder’s operations specifications or in addition to that minimum complement, to duty in an aircraft during flight time and whose duties include but are not necessarily limited to cabin-safety-related responsibilities.

“Rest period” means the period free of all responsibility for work or duty should the occasion arise.

(b) Except as provided in paragraph (c) of this section, a certificate holder may assign a duty period to a flight attendant only when the applicable duty period limitations and rest requirements of this paragraph are met.

(1) Except as provided in paragraphs (b)(4), (b)(5), and (b)(6) of this section, no certificate holder may assign a flight attendant to a scheduled duty period of more than 14 hours.

(b)(2) of this section may be scheduled or reduced to 8 consecutive hours if the flight attendant is provided a subsequent rest period of at least 10 consecutive hours; this subsequent rest period must be scheduled to begin no later than 24 hours after the beginning of the reduced rest period and must occur between the completion of the scheduled duty period and the commencement of the subsequent duty period.

(4) A certificate holder may assign a flight attendant to a scheduled duty period of more than 14 hours, but no more than 16 hours, if the certificate holder has assigned to the flight or flights in that duty period at least one flight attendant in addition to the minimum flight attendant complement required for the flight or flights in that duty period under the certificate holder’s operations specifications.

(5) A certificate holder may assign a flight attendant to a scheduled duty period of more than 16 hours, but no more than 18 hours, if the certificate holder has assigned to the flight or flights in that duty period at least two flight attendants in addition to the minimum flight attendant complement required for the flight or flights in that duty period under the certificate holder’s operations specifications.

(6) A certificate holder may assign a flight attendant to a scheduled duty period of more than 18 hours, but no more than 20 hours, if the scheduled duty period includes one or more flights that land or take off outside the 48 contiguous states and the District of Columbia, and if the certificate holder has assigned to the flight or flights in that duty period at least three flight attendants in addition to the minimum flight attendant complement required for the flight or flights in that duty period under the certificate holder’s operations specifications.

(7) Except as provided in paragraph (b)(8) of this section, a flight attendant scheduled to a duty period of more than 14 hours but no more than 20 hours, as provided in paragraphs (b)(4), (b)(5), and (b)(6) of this section, must be given a scheduled rest period of at least 12 consecutive hours. This rest period must occur between the

rest period and must occur between the completion of the scheduled duty period and the commencement of the subsequent duty period.

(9) Notwithstanding paragraphs (b)(4), (b)(5), and (b)(6) of this section, if a certificate holder elects to reduce the rest period to 10 hours as authorized by paragraph (b)(8) of this section, the certificate holder may not schedule a flight attendant for a duty period of more than 14 hours during the 24-hour period commencing after the beginning of the reduced rest period.

(10) No certificate holder may assign a flight attendant any duty period with the certificate holder unless the flight attendant has had at least the minimum rest required under this section.

(11) No certificate holder may assign a flight attendant to perform any duty with the certificate holder during any required rest period.

(12) Time spent in transportation, not local in character, that a certificate holder requires of a flight attendant and provides to transport the flight attendant to an airport at which that flight attendant is to serve on a flight as a crewmember, or from an airport at which the flight attendant was relieved from duty to return to the flight attendant's home station, is not considered part of a rest period.

(13) Each certificate holder must relieve each flight attendant engaged in air transportation from all further duty for at least 24 consecutive hours during any 7 consecutive calendar days.

(14) A flight attendant is not considered to be scheduled for duty in excess of duty period limitations if the flights to which the flight attendant is assigned are scheduled and normally terminate within the limitations but due to circumstances beyond the control of the certificate holder (such as adverse weather conditions) are

procedures that—

(i) Apply to all flight attendants used in the certificate holder's operation;

(ii) Include the flight crewmember requirements contained in subpart F of this part, as appropriate to the operation being conducted, except that rest facilities on board the aircraft are not required; and

(iii) Include provisions to add one flight attendant to the minimum flight attendant complement for each flight crewmember who is in excess of the minimum number required in the aircraft type certificate data sheet and who is assigned to the aircraft under the provisions of subpart F of this part, as applicable.

(iv) Are approved by the Administrator and described or referenced in the certificate holder's operations specifications; and

(2) Whenever the Administrator finds that revisions are necessary for the continued adequacy of duty period limitation and rest requirement procedures that are required by paragraph (c)(1) of this section and that had been granted final approval, the certificate holder must, after notification by the Administrator, make any changes in the procedures that are found necessary by the Administrator. Within 30 days after the certificate holder receives such notice, it may file a petition to reconsider the notice with the [certificate-holding district office.] The filing of a petition to reconsider stays the notice, pending decision by the Administrator. However, if the Administrator finds that there is an emergency that requires immediate action in the interest of safety, the Administrator may, upon a statement of the reasons, require a change effective without stay.

(Amdt. 135-52, Eff. 9/19/94); [(Amdt. 135-60, Eff. 2/26/96)]

flight attendant crewmembers and for the approval of check pilots in operations under this part.

[(Amdt. 135-57, Eff. 3/19/96)]

§ 135.293 Initial and recurrent pilot testing requirements.

(a) No certificate holder may use a pilot, nor may any person serve as a pilot, unless, since the beginning of the 12th calendar month before that service, that pilot has passed a written or oral test, given by the Administrator or an authorized check pilot, on that pilot's knowledge in the following areas—

(1) The appropriate provisions of parts 61, 91, and 135 of this chapter and the operations specifications and the manual of the certificate holder;

(2) For each type of aircraft to be flown by the pilot, the aircraft powerplant, major components and systems, major appliances, performance and operating limitations, standard and emergency operating procedures, and the contents of the approved Aircraft Flight Manual or equivalent, as applicable;

(3) For each type of aircraft to be flown by the pilot, the method of determining compliance with weight and balance limitations for takeoff, landing and en route operations;

(4) Navigation and use of air navigation aids appropriate to the operation or pilot authorization, including, when applicable, instrument approach facilities and procedures;

(5) Air traffic control procedures, including IFR procedures when applicable;

(6) Meteorology in general, including the principles of frontal systems, icing, fog, thunderstorms, and windshear, and, if appropriate for the operation of the certificate holder, high altitude weather;

(7) Procedures for—

(i) Recognizing and avoiding severe weather situations;

pilots are not required to be tested on escaping from low-altitude windshear); and

(iii) Operating in or near thunderstorms (including best penetrating altitudes), turbulent air (including clear air turbulence), icing, hail, and other potentially hazardous meteorological conditions; and

(8) New equipment, procedures, or techniques, as appropriate.

(b) No certificate holder may use a pilot, nor may any person serve as a pilot, in any aircraft unless, since the beginning of the 12th calendar month before that service, that pilot has passed a competency check given by the Administrator or an authorized check pilot in that class of aircraft, if single-engine airplane other than turbojet, or that type of aircraft, if helicopter, multiengine airplane, or turbojet airplane, to determine the pilot's competence in practical skills and techniques in that aircraft or class of aircraft. The extent of the competency check shall be determined by the Administrator or authorized check point conducting the competency check. The competency check may include any of the maneuvers and procedures currently required for the original issuance of the particular pilot certificate required for the operations authorized and appropriate to the category, class and type of aircraft involved. For the purposes of this paragraph, type, as to an airplane, means any one of a group of airplanes determined by the Administrator to have a similar means of propulsion, the same manufacturer, and no significantly different handling or flight characteristics. For the purposes of this paragraph, type, as to a helicopter, means a basic make and model.

(c) The instrument proficiency check required by § 135.297 may be substituted for the competency check required by this section for the type of aircraft used in the check.

(d) For the purpose of this part, competent performance of a procedure or maneuver by a person to be used as a pilot requires that the pilot

§ 135.295 Initial and recurrent flight attendant crewmember testing requirements.

No certificate holder may use a flight attendant crewmember, nor may any person serve as a flight attendant crewmember unless, since the beginning of the 12th calendar month before that service, the certificate holder has determined by appropriate initial and recurrent testing that the person is knowledgeable and competent in the following areas as appropriate to assigned duties and responsibilities—

- (a) Authority of the pilot-in-command;
- (b) Passenger handling, including procedures to be followed in handling deranged persons or other persons whose conduct might jeopardize safety;
- (c) Crewmember assignments, functions, and responsibilities during ditching and evacuation of persons who may need the assistance of another person to move expeditiously to an exit in an emergency;
- (d) Briefing of passengers;
- (e) Location and operation of portable fire extinguishers and other items of emergency equipment;
- (f) Proper use of cabin equipment and controls;
- (g) Location and operation of passenger oxygen equipment;
- (h) Location and operation of all normal and emergency exits, including evacuation chutes and escape ropes; and
- (i) Seating of persons who may need assistance of another person to move rapidly to an exit in an emergency as prescribed by the certificate holder's operations manual.

§ 135.297 Pilot-in-command: Instrument proficiency check requirements.

- (a) No certificate holder may use a pilot, nor may any person serve, as a pilot-in-command of an aircraft under IFR unless, since the beginning

any type of nonprecision approach procedure under IFR unless, since the beginning of the 6th calendar month before that use, the pilot has satisfactorily demonstrated either that type of approach procedure or any other two different types of nonprecision approach procedures. The instrument approach procedure or procedures must include at least one straight-in approach, one circling approach, and one missed approach. Each type of approach procedure demonstrated must be conducted to published minimums for that procedure.

(c) The instrument proficiency check required by paragraph (a) of this section consists of an oral or written equipment test and a flight check under simulated or actual IFR conditions. The equipment test includes questions on emergency procedures, engine operation, fuel and lubrication systems, power settings, stall speeds, best engine-out speed, propeller and supercharger operations, and hydraulic, mechanical, and electrical systems, as appropriate. The flight check includes navigation by instruments, recovery from simulated emergencies, and standard instrument approaches involving navigational facilities which that pilot is to be authorized to use. Each pilot taking the instrument proficiency check must show that standard of competence required by § 135.293(d).

(1) The instrument proficiency check must—

(i) For a pilot-in-command of an airplane under § 135.243(a), include the procedures and maneuvers for an airline transport pilot certificate in the particular type of airplane, if appropriate; and

(ii) For a pilot-in-command of an airplane or helicopter under § 135.243(c), include the procedures and maneuvers for a commercial pilot certificate with an instrument rating and, if required, for the appropriate type rating.

(2) The instrument proficiency check must be given by an authorized check airman or by the Administrator.

(d) If the pilot-in-command is assigned to pilot only one type of aircraft, that pilot must take the instrument proficiency check required by paragraph (a) of this section in that type of aircraft.

pilot must initially take the instrument proficiency check required by paragraph (a) of this section in a multiengine aircraft, and each succeeding check alternately in single-engine and multiengine aircraft, but not more than one flight check during each period described in paragraph (a) of this section. Portions of a required flight check may be given in an aircraft simulator or other appropriate training device, if approved by the Administrator.

(g) If the pilot-in-command is authorized to use an autopilot system in place of a second-in-command, that pilot must show, during the required instrument proficiency check, that the pilot is able (without a second-in-command) both with and without using the autopilot to—

(1) Conduct instrument operations competently; and

(2) Properly conduct air-ground communications and comply with complex air traffic control instructions.

(3) Each pilot taking the autopilot check must show that, while using the autopilot, the airplane can be operated as proficiently as it would be if a second-in-command were present to handle air-ground communications and air traffic control instructions. The autopilot check need only be demonstrated once every 12 calendar months during the instrument proficiency check required under paragraph (a) of this section.

(h) [Deleted]

(Amdt. 135-15, Eff. 6/11/81)

**§ 135.299 Pilot-in-command: Line checks:
Routes and airports.**

(a) No certificate holder may use a pilot, nor may any person serve as a pilot-in-command of a flight unless, since the beginning of the 12th calendar month before that service, that pilot has passed a flight check in one of the types of aircraft which that pilot is to fly. The flight check shall—

on-airway route, or a portion of either of them.

(b) The pilot who conducts the check shall determine whether the pilot being checked satisfactorily performs the duties and responsibilities of a pilot-in-command in operations under this part, and shall so certify in the pilot training record.

(c) Each certificate holder shall establish in the manual required by § 135.21 a procedure which will ensure that each pilot who has not flown over a route and into an airport within the preceding 90 days will, before beginning the flight, become familiar with all available information required for the safe operation of that flight.

**§ 135.301 Crewmember: Tests and checks,
grace provisions, training to accepted standards.**

(a) If a crewmember who is required to take a test or a flight check under this part, completes the test or flight check in the calendar month before or after the calendar month in which it is required, that crewmember is considered to have completed the test or check in the calendar month in which it is required.

(b) If a pilot being checked under this subpart fails any of the required maneuvers, the person giving the check may give additional training to the pilot during the course of the check. In addition to repeating the maneuvers failed, the person giving the check may require the pilot being checked to repeat any other maneuvers that are necessary to determine the pilot's proficiency. If the pilot being checked is unable to demonstrate satisfactory performance to the person conducting the check, the certificate holder may not use the pilot, nor may the pilot serve, as a flight crewmember in operations under this part until the pilot has satisfactorily completed the check.

§ 135.303 [(Removed)]

[(Amdt. 135-44, Eff. 10/15/92)]

maintaining an approved training program for crewmembers, check airmen and instructors, and other operations personnel, and for the other training devices in the conduct of that program.

(b) For the purposes of this subpart, the following terms and definitions apply:

(1) *Initial training.* The training required for crewmembers who have not qualified and served in the same capacity on an aircraft.

(2) *Transition training.* The training required for crewmembers who have qualified and served in the same capacity on another aircraft.

(3) *Upgrade training.* The training required for crewmembers who have qualified and served as second-in-command on a particular aircraft type, before they serve as pilot-in-command on that aircraft.

(4) *Differences training.* The training required for crewmembers who have qualified and served on a particular type aircraft, when the Administrator finds differences training is necessary before a crewmember serves in the same capacity on a particular variation of that aircraft.

(5) *Recurrent training.* The training required for crewmembers to remain adequately trained and currently proficient for each aircraft, crewmember position, and type of operation in which the crewmember serves.

(6) *In flight.* The maneuvers, procedures, or functions that must be conducted in the aircraft.

[(Amdt. 135-57, Eff. 3/19/96)]

§ 135.323 Training program: General.

(a) Each certificate holder required to have a training program under § 135.341 shall:

(1) Establish, obtain the appropriate initial and final approval of, and provide a training program that meets this subpart and that ensures that each crewmember, flight instructor, check airman, and each person assigned duties for the carriage and handling of hazardous materials (as defined in

facilities and properly qualified ground instructors for the training required by this subpart.

(3) Provide and keep current for each aircraft type used and, if applicable, the particular variations within the aircraft type, appropriate training material, examinations, forms, instructions, and procedures for use in conducting the training and checks required by this subpart.

(4) Provide enough flight instructors, check airmen, and simulator instructors to conduct required flight training and flight checks, and simulator training courses allowed under this subpart.

(b) Whenever a crewmember who is required to take recurrent training under this subpart completes the training in the calendar month before, or the calendar month after, the month in which that training is required, the crewmember is considered to have completed it in the calendar month in which it was required.

(c) Each instructor, supervisor, or check airman who is responsible for a particular ground training subject, segment of flight training, course of training, flight check, or competence check under this part shall certify as to the proficiency and knowledge of the crewmember, flight instructor, or check airman concerned upon completion of that training or check. That certification shall be made a part of the crewmember's record. When the certification required by this paragraph is made by an entry in a computerized recordkeeping system, the certifying instructor, supervisor, or check airman, must be identified with that entry. However, the signature of the certifying instructor, supervisor, or check airman, is not required for computerized entries.

(d) Training subjects that apply to more than one aircraft or crewmember position and that have been satisfactorily completed during previous training while employed by the certificate holder for another aircraft or another crewmember position, need not be repeated during subsequent training other than recurrent training.

Administrator—

(1) An outline of the proposed or revised curriculum, that provides enough information for a preliminary evaluation of the proposed training program or revision; and

(2) Additional relevant information that may be requested by the Administrator.

(b) If the proposed training program or revision complies with this subpart, the Administrator grants initial approval in writing after which the certificate holder may conduct the training under that program. The Administrator then evaluates the effectiveness of the training program and advises the certificate holder of deficiencies, if any, that must be corrected.

(c) The Administrator grants final approval of the proposed training program or revision if the certificate holder shows that the training conducted under the initial approval in paragraph (b) of this section ensures that each person who successfully completes the training is adequately trained to perform that person's assigned duties.

(d) Whenever the Administrator finds that revisions are necessary for the continued adequacy of a training program that has been granted final approval, the certificate holder shall, after notification by the Administrator, make any changes in the program that are found necessary by the Administrator. Within 30 days after the certificate holder receives the notice, it may file a petition to reconsider the notice with the Administrator. The filing of a petition to reconsider stays the notice pending a decision by the Administrator. However, if the Administrator finds that there is an emergency that requires immediate action in the interest of safety, the Administrator may, upon a statement of the reasons, require a change effective without stay.

§ 135.327 Training program: Curriculum.

(a) Each certificate holder must prepare and keep current a written training program curriculum for each type of aircraft for each crewmember required for that type aircraft. The curriculum must include ground and flight training required by this subpart.

of the approved normal, abnormal, and emergency maneuvers, procedures and functions that will be performed during each flight training phase or flight check, indicating those maneuvers, procedures and functions that are to be performed during the inflight portions of flight training and flight checks.

§ 135.329 Crewmember training requirements.

(a) Each certificate holder must include in its training program the following initial and transition ground training as appropriate to the particular assignment of the crewmember:

(1) Basic indoctrination ground training for newly hired crewmembers including instruction in at least the—

(i) Duties and responsibilities of crewmembers as applicable;

(ii) Appropriate provisions of this chapter;

(iii) Contents of the certificate holder's operating certificate and operations specifications (not required for flight attendants); and

(iv) Appropriate portions of the certificate holder's operating manual.

(2) The initial and transition ground training in §§ 135.345 and 135.349, as applicable.

(3) Emergency training in § 135.331.

(b) Each training program must provide the initial and transition flight training in § 135.347, as applicable.

(c) Each training program must provide recurrent ground and flight training in § 135.351.

(d) Upgrade training in §§ 135.345 and 135.347 for a particular type aircraft may be included in the training program for crewmembers who have qualified and served as second-in-command on that aircraft.

(e) In addition to initial, transition, upgrade and recurrent training, each training program must provide ground and flight training, instruction, and practice necessary to ensure that each crewmember—

(a) Each training program must provide emergency training under this section for each aircraft type, model, and configuration, each crewmember, and each kind of operation conducted, as appropriate for each crewmember and the certificate holder.

(b) Emergency training must provide the following:

(1) Instruction in emergency assignments and procedures, including coordination among crewmembers.

(2) Individual instruction in the location, function, and operation of emergency equipment including—

(i) Equipment used in ditching and evacuation;

(ii) First-aid equipment and its proper use; and

(iii) Portable fire extinguishers, with emphasis on the type of extinguisher to be used on different classes of fires.

(3) Instruction in the handling of emergency situations including—

(i) Rapid decompression;

(ii) Fire in flight or on the surface and smoke control procedures with emphasis on electrical equipment and related circuit breakers found in cabin areas;

(iii) Ditching and evacuation;

(iv) Illness, injury, or other abnormal situations involving passengers or crewmembers; and

(v) Hijacking and other unusual situations.

(4) Review of the certificate holder's previous aircraft accidents and incidents involving actual emergency situations.

(c) Each crewmember must perform at least the following emergency drills, using the proper emergency equipment and procedures, unless the Administrator finds that, for a particular drill, the crewmember can be adequately trained by demonstration:

(1) Ditching, if applicable.

(2) Emergency evacuation.

the use of other individual flotation devices, if applicable.

(d) Crewmembers who serve in operations above 25,000 feet must receive instruction in the following:

(1) Respiration.

(2) Hypoxia.

(3) Duration of consciousness without supplemental oxygen at altitude.

(4) Gas expansion.

(5) Gas bubble formation.

(6) Physical phenomena and incidents of decompression.

§ 135.333

Training requirements: Handling and carriage of hazardous materials.

(a) Except as provided in paragraph (d) of this section, no certificate holder may use any person to perform, and no person may perform, any assigned duties and responsibilities for the handling or carriage of hazardous materials (as defined in 49 CFR 171.8), unless within the preceding 12 calendar months that person has satisfactorily completed initial or recurrent training in an appropriate training program established by the certificate holder, which includes instruction regarding—

(1) The proper shipper certification, packaging, marking, labeling, and documentation for hazardous materials; and

(2) The compatibility, loading, storage, and handling characteristics of hazardous materials.

(b) Each certificate holder shall maintain a record of the satisfactory completion of the initial and recurrent training given to crewmembers and ground personnel who perform assigned duties and responsibilities for the handling and carriage of hazardous materials.

(c) Each certificate holder that elects not to accept hazardous materials shall ensure that each crewmember is adequately trained to recognize those items classified as hazardous materials.

(d) If a certificate holder operates into or out of airports at which trained employees or contract

(a) Training courses using aircraft simulators and other training devices may be included in the certificate holder's training program if approved by the Administrator.

(b) Each aircraft simulator and other training device that is used in a training course or in checks required under this subpart must meet the following requirements:

(1) It must be specifically approved for—

(i) The certificate holder; and

(ii) The particular maneuver, procedure, or crewmember function involved.

(2) It must maintain the performance, functional, and other characteristics that are required for approval.

(3) Additionally, for aircraft simulators, it must be—

(i) Approved for the type aircraft and, if applicable, the particular variation within type for which the training or check is being conducted; and

(ii) Modified to conform with any modification to the aircraft being simulated that changes the performance, functional, or other characteristics required for approval.

(c) A particular aircraft simulator or other training device may be used by more than one certificate holder.

(d) In granting initial and final approval of training programs or revisions to them, the Administrator considers the training devices, methods, and procedures listed in the certificate holder's curriculum under § 135.327.

(Amdt. 135-1, Eff. 5/7/79)

§ 135.337 Training program: Check airmen and instructor qualifications.

(a) No certificate holder may use a person, nor may any person serve, as a flight instructor or check airman in a training program established under this subpart unless, for the particular aircraft type involved, that person—

serve as a pilot-in-command in operations under this part;

(4) Has satisfactorily completed the applicable training requirements of § 135.339;

(5) Holds a Class I or Class II medical certificate required to serve as a pilot-in-command in operations under this part;

(6) In the case of a check airman, has been approved by the Administrator for the airman duties involved; and

(7) In the case of a check airman used in an aircraft simulator only, holds a Class III medical certificate.

(b) No certificate holder may use a person, nor may any person serve, as a simulator instructor for a course of training given in an aircraft simulator under this subpart unless that person—

(1) Holds at least a commercial pilot certificate; and

(2) Has satisfactorily completed the following as evidenced by the approval of a check airman—

(i) Appropriate initial pilot and flight instructor ground training under this subpart; and

(ii) A simulator flight training course in the type simulator in which that person instructs under this subpart.

§ 135.339 Check airmen and flight instructors: Initial and transition training.

(a) The initial and transition ground training for pilot check airmen must include the following:

(1) Pilot check airman duties, functions, and responsibilities.

(2) The applicable provisions of this chapter and certificate holder's policies and procedures.

(3) The appropriate methods, procedures, and techniques for conducting the required checks.

(4) Proper evaluation of pilot performance including the detection of—

(i) Improper and insufficient training; and

(ii) Personal characteristics that could adversely affect safety.

following:

(1) The fundamental principles of the teaching-learning process.

(2) Teaching methods and procedures.

(3) The instructor-student relationship.

(c) The initial and transition flight training for pilot check airmen and pilot flight instructors must include the following:

(1) Enough inflight training and practice in conducting flight checks from the left and right pilot seats in the required normal, [abnormal]*, and emergency maneuvers to ensure that person's competence to conduct the pilot flight checks and flight training under this subpart.

(2) The appropriate safety measures to be taken from either pilot seat for emergency situations that are likely to develop in training.

(3) The potential results of improper or untimely safety measures during training.

The requirements of paragraphs (2) and (3) of this paragraph may be accomplished in flight or in an approved simulator.

§ 135.341 Pilot and flight attendant crewmember training programs.

(a) Each certificate holder, other than one who uses only one pilot in the certificate holder's operations, shall establish and maintain an approved pilot training program, and each certificate holder who uses a flight attendant crewmember shall establish and maintain an approved flight attendant training program, that is appropriate to the operations to which each pilot and flight attendant is to be assigned, and will ensure that they are adequately trained to meet the applicable knowledge and practical testing requirements of §§ 135.293 through 135.301. However, the Administrator may authorize a deviation from this section if the Administrator finds that, because of the limited size and scope of the operation, safety will allow a deviation from these requirements.

*Corrected

(c) Each certificate holder required to have a training program by paragraph (a) of this section shall provide current and appropriate study materials for use by each required pilot and flight attendant.

(d) The certificate holder shall furnish copies of the pilot and flight attendant crewmember training program, and all changes and additions, to the assigned representative of the Administrator. If the certificate holder uses training facilities of other persons, a copy of those training programs or appropriate portions used for those facilities shall also be furnished. Curricula that follow FAA published curricula may be cited by reference in the copy of the training program furnished to the representative of the Administrator and need not be furnished with the program.

(Amdt. 135-18, Eff. 8/2/82)

§ 135.343 Crewmember initial and recurrent training requirements.

No certificate holder may use a person, nor may any person serve, as a crewmember in operations under this part unless that crewmember has completed the appropriate initial or recurrent training phase of the training program appropriate to the type of operation in which the crewmember is to serve since the beginning of the 12th calendar month before that service. This section does not apply to a certificate holder that uses only one pilot in the certificate holder's operations.

(Amdt. 135-18, Eff. 8/2/82)

§ 135.345 Pilots: Initial, transition, and upgrade ground training.

Initial, transition, and upgrade ground training for pilots must include instruction in at least the following, as applicable to their duties:

(a) General subjects—

(1) The certificate holder's flight locating procedures;

(2) Principles and methods for determining weight and balance, and runway limitations for takeoff and landing;

(6) Normal and emergency communication procedures;

(7) Visual cues before and during descent below DH or MDA; and

(8) Other instructions necessary to ensure the pilot's competence.

(b) For each aircraft type—

(1) A general description;

(2) Performance characteristics;

(3) Engines and propellers;

(4) Major components;

(5) Major aircraft systems (i.e., flight controls, electrical, and hydraulic), other systems, as appropriate, principles of normal, abnormal, and emergency operations, appropriate procedures and limitations;

(6) **Knowledge and** procedures for—

(i) Recognizing and avoiding severe weather situations;

(ii) Escaping from severe weather situations, in case of inadvertent encounters, including low-altitude windshear (except that rotorcraft pilots are not required to be trained in escaping from low-altitude windshear);

(iii) Operating in or near thunderstorms (including best penetrating altitudes), turbulent air (including clear air turbulence), icing, hail, and other potentially hazardous meteorological conditions; and

[(iv) Operating airplanes during ground icing conditions, (i.e., any time conditions are such that frost, ice, or snow may reasonably be expected to adhere to the airplane), if the certificate holder expects to authorize takeoffs in ground icing conditions, including:

[(A) The use of holdover times when using deicing/anti-icing fluids;

[(B) Airplane deicing/anti-icing procedures, including inspection and check procedures and responsibilities;

[(C) Communications;

[(D) Airplane surface contamination (i.e., adherence of frost, ice, or snow) and critical

nation on the airplane;]

(7) Operating limitations;

(8) Fuel consumption and cruise control;

(9) Flight planning;

(10) Each normal and emergency procedure; and

(11) The approved Aircraft Flight Manual, or equivalent.

(Amdt. 135-27, Eff. 1/2/89); **[(Amdt. 135-46, Eff. 1/31/94)]**

§ 135.347

Pilots: Initial, transition, upgrade, and differences flight training.

(a) Initial, transition, upgrade, and differences training for pilots must include flight and practice in each of the maneuvers and procedures in the approved training program curriculum.

(b) The maneuvers and procedures required by paragraph (a) of this section must be performed in flight, except to the extent that certain maneuvers and procedures may be performed in an aircraft simulator, or an appropriate training device, as allowed by this subpart.

(c) If the certificate holder's approved training program includes a course of training using an aircraft simulator or other training device, each pilot must successfully complete—

(1) Training and practice in the simulator or training device in at least the maneuvers and procedures in this subpart that are capable of being performed in the aircraft simulator or training device; and

(2) A flight check in the aircraft or a check in the simulator or training **[device]*** to the level of proficiency of a pilot-in-command or second-in-command, as applicable, in at least the maneuvers and procedures that are capable of being performed in an aircraft simulator or training device.

*Corrected

to be followed in handling deranged persons or other persons whose conduct might jeopardize safety.

(b) For each aircraft type—

(1) A general description of the aircraft emphasizing physical characteristics that may have a bearing on ditching, evacuation, and inflight emergency procedures and on other related duties;

(2) The use of both the public address system and the means of communicating with other flight crewmembers, including emergency means in the case of attempted hijacking or other unusual situations; and

(3) Proper use of electrical galley equipment and the controls for cabin heat and ventilation.

§ 135.351 Recurrent training.

(a) Each certificate holder must ensure that each crewmember receives recurrent training and is adequately trained and currently proficient for the type aircraft and crewmember position involved.

(b) Recurrent ground training for crewmembers must include at least the following:

gency training.]

(c) Recurrent flight training for pilots must include, at least, flight training in the maneuvers or procedures in this subpart, except that satisfactory completion of the check required by § 135.293 within the preceding 12 calendar months may be substituted for recurrent flight training.

(Amdt. 135-27, Eff. 1/2/89); [(Amdt. 135-46, Eff. 1/31/94)]

§ 135.353 Prohibited drugs.

(a) Each certificate holder or operator shall provide each employee performing a [function listed]* in appendix I to part 121 of this chapter and his or her supervisor with the training specified in that appendix.

(b) No certificate holder or operator may use any contractor to perform a function specified in appendix I to part 121 of this chapter unless that contractor provides each of its employees performing that function for the certificate holder or the operator and his or her supervisor with the training specified in that appendix.

Docket No. 25148 (53 FR 47061) Eff. 11/21/88;
(Amdt. 135-28, Eff. 12/21/88)

nance, preventive maintenance, and alterations for each certificate holder as follows:

(1) Aircraft that are type certificated for a passenger seating configuration, excluding any pilot seat, of nine seats or less, shall be maintained under parts 91 and 43 of this chapter and §§ 135.415, 135.417, and 135.421. An approved aircraft inspection program may be used under § 135.419.

(2) Aircraft that are type certificated for a passenger seating configuration, excluding any pilot seat, of ten seats or more, shall be maintained under a maintenance program in §§ 135.415, 135.417, and 135.423 through 135.443.

(b) A certificate holder who is not otherwise required, may elect to maintain its aircraft under paragraph (a)(2) of this section.

§ 135.413 Responsibility for airworthiness.

(a) Each certificate holder is primarily responsible for the airworthiness of its aircraft, including airframes, aircraft engines, propellers, rotors, appliances, and parts, and shall have its aircraft maintained under this chapter, and shall have defects repaired between required maintenance under part 43 of this chapter.

(b) Each certificate holder who maintains its aircraft under § 135.411(a)(2) shall—

(1) Perform the maintenance, preventive maintenance, and alteration of its aircraft, including airframe, aircraft engines, propellers, rotors, appliances, emergency equipment and parts, under its manual and this chapter; or

(2) Make arrangements with another person for the performance of maintenance, preventive maintenance or alteration. However, the certificate holder shall ensure that any maintenance, preventive maintenance, or alteration that is performed by another person is performed under the certificate holder's manual and this chapter.

defect in an aircraft concerning—

(1) Fires during flight and whether the related fire-warning system functioned properly;

(2) Fires during flight not protected by related fire-warning system;

(3) False fire-warning during flight;

(4) An exhaust system that causes damage during flight to the engine, adjacent structure, equipment, or components;

(5) An aircraft component that causes accumulation or circulation of smoke, vapor, or toxic or noxious fumes in the crew compartment or passenger cabin during flight;

(6) Engine shutdown during flight because of flameout;

(7) Engine shutdown during flight when external damage to the engine or aircraft structure occurs;

(8) Engine shutdown during flight due to foreign object ingestion or icing;

(9) Shutdown of more than one engine during flight;

(10) A propeller feathering system or ability of the system to control overspeed during flight;

(11) A fuel or fuel-dumping system that affects fuel flow or causes hazardous leakage during flight;

(12) An unwanted landing gear extension or retraction or opening or closing of landing gear doors during flight;

(13) Brake system components that result in loss of brake actuating force when the aircraft is in motion on the ground;

(14) Aircraft structure that requires major repair;

(15) Cracks, permanent deformation, or corrosion of aircraft structures, if more than the maximum acceptable to the manufacturer or the FAA; and

(16) Aircraft components or systems that result in taking emergency actions during flight (except action to shut-down an engine).

operation of the aircraft.

(d) Each certificate holder shall send each report required by this section, in writing, covering each 24-hour period beginning at 0900 hours local time of each day and ending at 0900 hours local time on the next day to the FAA Flight Standards District Office charged with the overall inspection of the certificate holder. Each report of occurrences during a 24-hour period must be mailed or delivered to that office within the next 72 hours. However, a report that is due on Saturday or Sunday may be mailed or delivered on the following Monday and one that is due on a holiday may be mailed or delivered on the next work day. For aircraft operated in areas where mail is not collected, reports may be mailed or delivered within 72 hours after the aircraft returns to a point where the mail is collected.

(e) The certificate holder shall transmit the reports required by this section on a form and in a manner prescribed by the Administrator, and shall include as much of the following as is available:

(1) The type and identification number of the aircraft.

(2) The name of the operator.

(3) The date.

(4) The nature of the failure, malfunction, or defect.

(5) Identification of the part and system involved, including available information pertaining to type designation of the major component and time since last overhaul, if known.

(6) Apparent cause of the failure, malfunction or defect (e.g., wear, crack, design deficiency, or personnel error).

(7) Other pertinent information necessary for more complete identification, determination of seriousness, or corrective action.

(f) A certificate holder that is also the holder of a type certificate (including a supplemental type certificate), a Parts Manufacturer Approval, or a Technical Standard Order Authorization, or that is the licensee of a type certificate need not report a failure, malfunction, or defect under this section

information, including information from the manufacturer or other agency, concerning a report required by this section, it shall expeditiously submit it as a supplement to the first report and reference the date and place of submission of the first report.

§ 135.417 Mechanical interruption summary report.

Each certificate holder shall mail or deliver, before the end of the 10th day of the following month, a summary report of the following occurrences in multiengine aircraft for the preceding month to the [certificate-holding district office:]

(a) Each interruption to a flight, unscheduled change of aircraft en route, or unscheduled stop or diversion from a route, caused by known or suspected mechanical difficulties or malfunctions that are not required to be reported under § 135.415.

(b) The number of propeller featherings in flight, listed by type of propeller and engine and aircraft on which it was installed. Propeller featherings for training, demonstration, or flight check purposes need not be reported.

[(Amdt. 135-60, Eff. 2/26/96)]

§ 135.419 Approved aircraft inspection program.

(a) Whenever the Administrator finds that the aircraft inspections required or allowed under part 91 of this chapter are not adequate to meet this part, or upon application by a certificate holder, the Administrator may amend the certificate holder's operations specifications under § 135.17, to require or allow an approved aircraft inspection program for any make and model aircraft of which the certificate holder has the exclusive use of at least one aircraft (as defined in § 135.25(b)).

(b) A certificate holder who applies for an amendment of its operations specifications to allow an approved aircraft inspection program must submit that program with its application for approval by the Administrator.

lowing:

(1) Instructions and procedures for the conduct of aircraft inspections (which must include necessary tests and checks), setting forth in detail the parts and areas of the airframe, engines, propellers, rotors, and appliances, including emergency equipment, that must be inspected.

(2) A schedule for the performance of the aircraft inspections under paragraph (1) of this paragraph expressed in terms of the time in service, calendar time, number of system operations, or any combination of these.

(3) Instructions and procedures for recording discrepancies found during inspections and correction or deferral of discrepancies including form and disposition of records.

(e) After approval, the certificate holder shall include the approved aircraft inspection program in the manual required by § 135.21.

(f) Whenever the Administrator finds that revisions to an approved aircraft inspection program are necessary for the continued adequacy of the program, the certificate holder shall, after notification by the Administrator, make any changes in the program found by the Administrator to be necessary. The certificate holder may petition the Administrator to reconsider the notice to make any changes in a program. The petition must be filed with the representatives of the Administrator assigned to it within 30 days after the certificate holder receives the notice. Except in the case of an emergency requiring immediate action in the interest of safety, the filing of the petition stays the notice pending a decision by the Administrator.

(g) Each certificate holder who has an approved aircraft inspection program shall have each aircraft that is subject to the program inspected in accordance with the program.

(h) The registration number of each aircraft that is subject to an approved aircraft inspection program must be included in the operations specifications of the certificate holder.

equipment required by this chapter.

(b) For the purpose of this section, a manufacturer's maintenance program is one which is contained in the maintenance manual or maintenance instructions set forth by the manufacturer as required by this chapter for the aircraft, aircraft engine, propeller, rotor or item of emergency equipment.

§ 135.423

Maintenance, preventive maintenance, and alteration organization.

(a) Each certificate holder that performs any of its maintenance (other than required inspections), preventive maintenance, or alterations, and each person with whom it arranges for the performance of that work, must have an organization adequate to perform the work.

(b) Each certificate holder that performs any inspections required by its manual under § 135.427(b)(2) or (3), (in this subpart referred to as "required inspections"), and each person with whom it arranges for the performance of that work, must have an organization adequate to perform that work.

(c) Each person performing required inspections in addition to other maintenance, preventive maintenance, or alterations, shall organize the performance of those functions so as to separate the required inspection functions from the other maintenance, preventive maintenance, and alteration functions. The separation shall be below the level of administrative control at which overall responsibility for the required inspection functions and other maintenance, preventive maintenance, and alteration functions is exercised.

§ 135.425

Maintenance, preventive maintenance, and alteration programs.

Each certificate holder shall have an inspection program and a program covering other maintenance, preventive maintenance, and alterations, that ensures that—

§ 135.427 Manual requirements.

(a) Each certificate holder shall put in its manual the chart or description of the certificate holder's organization required by § 135.423 and a list of persons with whom it has arranged for the performance of any of its required inspections, other maintenance, preventive maintenance, or alterations, including a general description of that work.

(b) Each certificate holder shall put in its manual the programs required by § 135.425 that must be followed in performing maintenance, preventive maintenance, and alterations of that certificate holder's aircraft, including airframes, aircraft engines, propellers, rotors, appliances, emergency equipment, and parts, and must include at least the following:

(1) The method of performing routine and nonroutine maintenance (other than required inspections), preventive maintenance, and alterations.

(2) A designation of the items of maintenance and alteration that must be inspected (required inspections) including at least those that could result in a failure, malfunction, or defect endangering the safe operation of the aircraft, if not performed properly or if improper parts or materials are used.

(3) The method of performing required inspections and a designation by occupational title of personnel authorized to perform each required inspection.

(4) Procedures for the reinspection of work performed under previous required inspection findings ("buy-back procedures").

(5) Procedures, standards, and limits necessary for required inspections and acceptance or rejection of the items required to be inspected and for periodic inspection and calibration of precision tools, measuring devices, and test equipment.

(6) Procedures to ensure that all required inspections are performed.

(7) Instructions to prevent any person who performs any item of work from performing any required inspection of that work.

(9) Procedures to ensure that required inspections, other maintenance, preventive maintenance, and alterations that are not completed as a result of work interruptions are properly completed before the aircraft is released to service.

(c) Each certificate holder shall put in its manual a suitable system (which may include a coded system) that provides for the retention of the following information—

(1) A description (or reference to data acceptable to the Administrator) of the work performed;

(2) The name of the person performing the work if the work is performed by a person outside the organization of the certificate holder; and

(3) The name or other positive identification of the individual approving the work.

§ 135.429 Required inspection personnel.

(a) No person may use any person to perform required inspections unless the person performing the inspection is appropriately certificated, properly trained, qualified, and authorized to do so.

(b) No person may allow any person to perform a required inspection unless, at the time, the person performing that inspection is under the supervision and control of an inspection unit.

(c) No person may perform a required inspection if that person performed the item of work to be inspected.

(d) In the case of rotorcraft that operate in remote areas or sites, the Administrator may approve procedures for the performance of required inspection items by a pilot when no other qualified person is available, provided—

(1) The pilot is employed by the certificate holder;

(2) It can be shown to the satisfaction of the Administrator that each pilot authorized to perform required inspections is properly trained and qualified;

(3) The required inspection is a result of a mechanical interruption and is not a part of a certificate holder's continuous airworthiness maintenance program;

(e) Each certificate holder shall maintain, or shall determine that each person with whom it arranges to perform its required inspections maintains, a current listing of persons who have been trained, qualified, and authorized to conduct required inspections. The persons must be identified by name, occupational title and the inspections that they are authorized to perform. The certificate holder (or person with whom it arranges to perform its required inspections) shall give written information to each person so authorized, describing the extent of that person's responsibilities, authorities, and inspectional limitations. The list shall be made available for inspection by the Administrator upon request.

(Amdt. 135-20, Eff. 1/6/87)

§ 135.431 Continuing analysis and surveillance.

(a) Each certificate holder shall establish and maintain a system for the continuing analysis and surveillance of the performance and effectiveness of its inspection program and the program covering other maintenance, preventive maintenance, and alterations and for the correction of any deficiency in those programs, regardless of whether those programs are carried out by the certificate holder or by another person.

(b) Whenever the Administrator finds that either or both of the programs described in paragraph (a) of this section does not contain adequate procedures and standards to meet this part, the certificate holder shall, after notification by the Administrator, make changes in those programs requested by the Administrator.

(c) A certificate holder may petition the Administrator to reconsider the notice to make a change in a program. The petition must be filed with the [certificate-holding district office] within 30 days after the certificate holder receives the notice. Except in the case of an emergency requiring immediate action in the interest of safety, the filing of the petition stays the notice pending a decision by the Administrator.

[(Amdt. 135-60, Eff. 2/26/96)]

equipment in use and is competent to perform that person's duties.

§ 135.435 Certificate requirements.

(a) Except for maintenance, preventive maintenance, alterations, and required inspections performed by repair stations certificated under the provisions of subpart C of part 145 of this chapter, each person who is directly in charge of maintenance, preventive maintenance, or alterations, and each person performing required inspections must hold an appropriate airman certificate.

(b) For the purpose of this section, a person "directly in charge" is each person assigned to a position in which that person is responsible for the work of a shop or station that performs maintenance, preventive maintenance, alterations, or other functions affecting airworthiness. A person who is "directly in charge" need not physically observe and direct each worker constantly but must be available for consultation and decision on matters requiring instruction or decision from higher authority than that of the person performing the work.

§ 135.437 Authority to perform and approve maintenance, preventive maintenance, and alterations.

(a) A certificate holder may perform, or make arrangements with other persons to perform, maintenance, preventive maintenance, and alterations as provided in its maintenance manual. In addition, a certificate holder may perform these functions for another certificate holder as provided in the maintenance manual of the other certificate holder.

(b) A certificate holder may approve any airframe, aircraft engine, propeller, rotor, or appliance for return to service after maintenance, preventive maintenance, or alterations that are performed under paragraph (a) of this section. However, in the case of a major repair or alteration, the work must have been done in accordance with technical data [approved]* by the Administrator.

*[Corrected]

release under § 135.443 have been met.

(2) Records contain the following information:

(i) The total time in service of the airframe, engine, propeller, and rotor.

(ii) The current status of life-limited parts of each airframe, engine, propeller, rotor, and appliance.

(iii) The time since last overhaul of each item installed on the aircraft which are required to be overhauled on a specified time basis.

(iv) The identification of the current inspection status of the aircraft, including the time since the last inspections required by the inspection program under which the aircraft and its appliances are maintained.

(v) The current status of applicable airworthiness directives, including the date and methods of compliance, and, if the airworthiness directive involves recurring action, the time and date when the next action is required.

(vi) A list of current major alterations and repairs to each airframe, engine, propeller, rotor, and appliance.

(b) Each certificate holder shall retain the records required to be kept by this section for the following periods:

(1) Except for the records of the last complete overhaul of each airframe, engine, propeller, rotor, and appliance the records specified in paragraph (a)(1) of this section shall be retained until the work is repeated or superseded by other work or for one year after the work is performed.

(2) The records of the last complete overhaul of each airframe, engine, propeller, rotor, and appliance shall be retained until the work is superseded by work of equivalent scope and detail.

(3) The records specified in paragraph (a)(2) of this section shall be retained and transferred with the aircraft at the time the aircraft is sold.

(c) The certificate holder shall make all maintenance records required to be kept by this section available for inspection by the Administrator or any representative of the National Transportation Safety Board.

(a) The records specified in § 135.439(a)(2).

(b) The records specified in § 135.439(a)(1) which are not included in the records covered by paragraph (a) of this section, except that the purchaser may allow the seller to keep physical custody of such records. However, custody of records by the seller does not relieve the purchaser of its responsibility under § 135.439(c) to make the records available for inspection by the Administrator or any representative of the National Transportation Safety Board.

§ 135.443

Airworthiness release or aircraft maintenance log entry.

(a) No certificate holder may operate an aircraft after maintenance, preventive maintenance, or alterations are performed on the aircraft unless the certificate holder prepares, or causes the person with whom the certificate holder arranges for the performance of the maintenance, preventive maintenance, or alterations, to prepare—

(1) An airworthiness release; or

(2) An appropriate entry in the aircraft maintenance log.

(b) The airworthiness release or log entry required by paragraph (a) of this section must—

(1) Be prepared in accordance with the procedure in the certificate holder's manual;

(2) Include a certificate that—

(i) The work was performed in accordance with the requirements of the certificate holder's manual;

(ii) All items required to be inspected were inspected by an authorized person who determined that the work was satisfactorily completed;

(iii) No known condition exists that would make the aircraft unairworthy;

(iv) So far as the work performed is concerned, the aircraft is in condition for safe operation; and

(3) Be signed by an authorized certificated mechanic or repairman, except that a certificated repairman may sign the release or entry only

passenger-carrying operations in airplanes that have passenger-seating configurations of 10 to 30 seats (excluding any crewmember seat) and those conducting scheduled passenger-carrying operations in turbojet airplanes regardless of seating configuration. The rule revises the requirements concerning operating certificates and operations specifications for all part 121, 125, and 135 certificate holders. The rule also requires certain management officials for all certificate holders under parts 121 and 135. The rule is intended to increase safety in scheduled passenger-carrying operations and to clarify, update, and consolidate the certification and operations requirements for persons who transport passengers or property by air for compensation or hire.

NOTE: Please refer to preamble pages P-619 through P-734 for entire preamble.

- (a)(1) Certificates.
- (a)(2) Certification requirements.
- (a)(3) Operating requirements.
- (b) Operations conducted under more than one paragraph.
- (c) Prohibition against operating without certificate or in violation of operations specifications.

2. Certificates and foreign air carrier operations specifications.

- (a) Air Carrier Operating Certificate.
- (b) Operating Certificate.
- (c) Foreign air carrier operations specifications.

3. Operations specifications.

4. Air carriers and those commercial operators engaged in scheduled intrastate common carriage.

- (a)(1) Airplanes, more than 30 seats/7,500 pounds payload, scheduled within 48 States.
- (a)(2) Airplanes, more than 30 seats/7,500 pounds payload, scheduled outside 48 States.
- (a)(3) Airplanes, more than 30 seats/7,500 pounds payload, not scheduled and all cargo.
- (b) Airplanes, 30 seats or less/7,500 or less pounds payload.
- (c) Rotorcraft, 30 seats or less/7,500 pounds or less payload.
- (d) Rotorcraft, more than 30 seats/more than 7,500 pounds payload.

5. Operations conducted by a person who is not engaged in air carrier operations, but is engaged in passenger operations, cargo operations, or both, as a commercial operator.

- (a) Airplanes, 20 or more seats/6,000 or more pounds payload.
- (b) Airplanes, less than 20 seats/less than 6,000 pounds payload.
- (c) Rotorcraft, 30 seats or less/7,500 pounds or less payload.
- (d) Rotorcraft, more than 30 seats/more than 7,500 pounds payload.

6. Definitions.

- (a) Terms in FAR.
 - (1) Domestic/flag/supplemental/commuter.
 - (2) ATCO.
- (b) FAR references to:
 - (1) Domestic air carriers.
 - (2) Flag air carriers.
 - (3) Supplemental air carriers.

- (5) Size of aircraft.
- (6) Maximum payload capacity.
- (7) Empty weight.
- (8) Maximum zero fuel weight.
- (9) Justifiable aircraft equipment.

(1) The types of operating certificates issued by the Federal Aviation Administration;

(2) The certification requirements an operator must meet in order to obtain and hold operations specifications for each type of operation conducted and each class and size of aircraft operated; and

(3) The operating requirements an operator must meet in conducting each type of operation and in operating each class and size of aircraft authorized in its operations specifications.

A person shall be issued only one certificate and all operations shall be conducted under that certificate, regardless of the type of operation or the class or size of aircraft operated. A person holding an air carrier operating certificate may not conduct any operations under the rules of part 125.

(b) Persons conducting operations under more than one paragraph of this SFAR shall meet the certification requirements specified in each paragraph and shall conduct operations in compliance with the requirements of the Federal Aviation Regulations specified in each paragraph for the operation conducted under that paragraph.

(c) Except as provided under this SFAR, no person may operate as an air carrier or as a commercial operator without, or in violation of, a certificate and operations specifications issued under this SFAR.

2. Certificates and foreign air carrier operations specifications.

(a) Persons authorized to conduct operations as an air carrier will be issued an Air Carrier Operating Certificate.

(b) Persons who are not authorized to conduct air carrier operations, but who are authorized to conduct passenger, cargo, or both, operations as a commercial operator will be issued an Operating Certificate.

(c) FAA certificates are not issued to foreign air carriers. Persons authorized to conduct operations in the United States as a foreign air carrier who hold a permit issued under Section 402 of the Federal Aviation Act of 1958, as amended (49 U.S.C. 1372), or other appropriate economic or exemption authority issued by the appropriate agency of the United States of America will be issued operations specifications in accordance with the requirements of part 129 and shall conduct their operations within the United States in accordance with those requirements.

3. Operations specifications.

The operations specifications associated with a certificate issued under paragraph 2(a) or (b) and the operations specifications issued under paragraph 2(c) of this SFAR will prescribe the authorizations, limitations and certain procedures under which each type of operation shall be conducted and each class and size of aircraft shall be operated.

4. Air carriers, and those commercial operators engaged in scheduled intrastate common carriage.

Each person who conducts operations as an air carrier or as a commercial operator engaged in scheduled intrastate common carriage of persons or property for compensation or hire in air commerce with—

(a) Airplanes having a passenger seating configuration of more than 30 seats, excluding any required crewmember seat, or a payload capacity of more than 7,500 pounds, shall comply with the certification requirements in part 121, and conduct its—

(1) Scheduled operations within the 48 contiguous states of the United States and the District of Columbia, including routes that extend outside the United States that are specifically authorized by the Administrator, with those airplanes in accordance with the requirements of part 121 applicable to domestic

authorize those operations to be conducted under paragraph (4)(a)(1) or (2) of this paragraph.

(b) Airplanes having a maximum passenger seating configuration of 30 seats or less, excluding any required crewmember seat, and a maximum payload capacity of 7,500 pounds or less, shall comply with the certification requirements in part 135, and conduct its operations with those airplanes in accordance with the requirements of part 135, and shall be issued operations specifications for those operations in accordance with those requirements; except that the Administrator may authorize a person conducting operations in transport category airplanes to conduct those operations in accordance with the requirements of paragraph 4(a) of this paragraph.

(c) Rotorcraft having a maximum passenger seating configuration of 30 seats or less and a maximum payload capacity of 7,500 pounds or less shall comply with the certification requirements in part 135, and conduct its operations with those aircraft in accordance with the requirements of part 135, and shall be issued operations specifications for those operations in accordance with those requirements.

(d) Rotorcraft having a passenger seating configuration of more than 30 seats or a payload capacity of more than 7,500 pounds shall comply with the certification requirements in part 135, and conduct its operations with those aircraft in accordance with the requirements of part 135, and shall be issued special operations specifications for those operations in accordance with those requirements and this SFAR.

5. Operations conducted by a person who is not engaged in air carrier operations, but is engaged in passenger operations, cargo operations, or both, as a commercial operator.

Each person, other than a person conducting operations under paragraph 2(c) or 4 of this SFAR, who conducts operations with—

(a) Airplanes having a passenger seating configuration of 20 or more, excluding any required crewmember seat, or a maximum payload capacity of 6,000 pounds or more, shall comply with the certification requirements in part 125, and conduct its operations with those airplanes in accordance with the requirements of part 125, and shall be issued operations specifications in accordance with those requirements, or shall comply with an appropriate deviation authority.

(b) Airplanes having a maximum passenger seating configuration of less than 20 seats, excluding any required crewmember seat, and a maximum payload capacity of less than 6,000 pounds shall comply with the certification requirements in part 135, and conduct its operations in those airplanes in accordance with the requirements of part 135, and shall be issued operations specifications in accordance with those requirements.

(c) Rotorcraft having a maximum passenger seating configuration of 30 seats or less and a maximum payload capacity of 7,500 pounds or less shall comply with the certification requirements in part 135, and conduct its operations in those aircraft in accordance with the requirements of part 135, and shall be issued operations specifications for those operations in accordance with those requirements.

(d) Rotorcraft having a passenger seating configuration of more than 30 seats or a payload capacity of more than 7,500 pounds shall comply with the certification requirements in part 135, and conduct its operations with those aircraft in accordance with the requirements of part 135, and shall be issued special operations specifications for those operations in accordance with those requirements and this SFAR.]

6. Definitions.

(a) Wherever in the Federal Aviation Regulations the terms—

(1) “Domestic air carrier operating certificate,” “flag air carrier operating certificate,” “supplemental air carrier operating certificate,” or “commuter air carrier (in the context of Air Carrier Operating Certificate) appears, it shall be deemed to mean an “Air Carrier Operating Certificate” issued and maintained under this SFAR.

(2) "Flag air carriers," it will be deemed to mean a regulation that applies to scheduled operations to any point outside the 48 contiguous states of the United States and the District of Columbia conducted by persons described in paragraph 4(a)(2) of this SFAR.

(3) "Supplemental air carriers," it will be deemed to mean a regulation that applies to charter and all-cargo operations conducted by persons described in paragraph 4(a)(3) of this SFAR.

(4) "Commuter air carriers," it will be deemed to mean a regulation that applies to scheduled passenger carrying operations, with a frequency of operations of at least five round trips per week on at least one route between two or more points according to the published flight schedules, conducted by persons described in paragraph 4(b) or (c) of this SFAR. This definition does not apply to part 93 of this chapter.

(c) For the purpose of this SFAR, the term—

(1) "Air carrier" means a person who meets the definition of an air carrier as defined in the Federal Aviation Act of 1958, as amended.

(2) "Commercial operator" means a person, other than an air carrier, who conducts operations in air commerce carrying persons or property for compensation or hire.

(3) "Foreign air carrier" means any person other than a citizen of the United States, who undertakes, whether directly or indirectly or by lease or any other arrangement, to engage in foreign air transportation.

(4) "Scheduled operations" means operations that are conducted in accordance with a published schedule for passenger operations which includes dates or times (or both) that is openly advertised or otherwise made readily available to the general public.

(5) "Size of aircraft" means an aircraft's size as determined by its seating configuration or payload capacity, or both.

(6) "Maximum payload capacity" means:

(i) For an aircraft for which a maximum zero fuel weight is prescribed in FAA technical specifications, the maximum zero fuel weight, less empty weight, less all justifiable aircraft equipment, and less the operating load (consisting of minimum flight crew, foods and beverages, and supplies and equipment related to foods and beverages, but not including disposable fuel or oil).

(ii) For all other aircraft, the maximum certificated takeoff weight of an aircraft, less the empty weight, less all justifiable aircraft equipment, and less the operating load (consisting of minimum fuel load, oil, and flightcrew). The allowance for the weight of the crew, oil, and fuel is as follows:

(A) Crew—200 pounds for each crewmember required by the Federal Aviation Regulations.

(B) Oil—350 pounds.

(C) Fuel—the minimum weight of fuel required by the applicable Federal Aviation Regulations for a flight between domestic points 174 nautical miles apart under VFR weather conditions that does not involve extended overwater operations.

(7) "Empty weight" means the weight of the airframe, engines, propellers, rotors, and fixed equipment. Empty weight excludes the weight of the crew and payload, but includes the weight of all fixed ballast, unusable fuel supply, undrainable oil, total quantity of engine coolant, and total quantity of hydraulic fluid.

(8) "Maximum zero fuel weight" means the maximum permissible weight of an aircraft with no disposable fuel or oil. The zero fuel weight figure may be found in either the aircraft type certificate data sheet, or the approved Aircraft Flight Manual, or both.

the rule will not cause significant economic impact because it will not change the volume of traffic, the altitude of flight routes, or the noise characteristics of the aircraft typically used in canyon flights between now and 1997. Therefore, the FAA has determined that the extension will not result in additional costs to the air tour operators.

Since the rule was first promulgated in 1987, the number of ground visitors increased by 50 percent. During this period, the estimated number of air tour operators remained unchanged, while the estimated revenue generated by the air tour industry has doubled. Therefore, the FAA has determined that any costs incurred by the air tour operators are not overly burdensome.

Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (RFA) was enacted by Congress to ensure that small entities are not unnecessarily or disproportionately burdened by Federal regulations. The RFA requires a Regulatory Flexibility Analysis if a rule will have "a significant economic impact on a substantial number of small entities." FAA Order 2100.14A outlines the FAA's procedures and criteria for implementing the RFA. Small entities are independently owned and operated small businesses and small, not-for-profit organizations. A substantial number of small entities is defined as a number that is 11 or more and which is more than one-third of the small entities subject to this direct final rule. The FAA determined that this rule will not result in a significant economic impact on a substantial number of small entities.

International Trade Impact Analysis

This action is expected to have neither an adverse impact on the trade opportunities for U.S. firms doing business abroad nor on foreign firms doing business in the United States. This assessment is based on the fact that part 135 air tour operators potentially impacted by this rule do not compete with similar operators abroad. That is, their competitive environment is confined to the Grand Canyon National Park.

Federalism Implications

This action will not have substantial effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this action will not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

International Civil Aviation Organization and Joint Aviation Regulations

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to comply with International Civil Aviation Organization Standards and Recommended Practices (SARP) to the maximum extent practicable. For this action, the FAA has reviewed the SARP of Annex 10. The FAA has determined that this amendment will not present any differences.

Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1980 (Pub. L. 96-511), there are no requirements for information collection associated with this rule.

Conclusion

For the reasons set forth above, the FAA has determined that this rule is not a significant regulatory action under Executive Order 12866. In addition, the FAA certifies that this action will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. This rule is not considered significant under DOT Regulatory Policies and Procedures.

Commuter Operations and General Certification and Operations Requirements

Adopted: December 12, 1995

Effective: January 19, 1996

(Published in 60 FR 65832, December 20, 1995)

SUMMARY: This rule requires certain commuter operators that now conduct operations under part 135 to conduct those operations under part 121. The commuter operators affected are those conducting scheduled passenger-carrying operations in airplanes that have passenger-seating configurations of 10 to 30 seats (excluding any crewmember seat) and those conducting scheduled passenger-carrying operations in turbojet airplanes regardless of seating configuration. The rule revises the requirements concerning operating certificates and operations specifications for all part 121, 125, and 135 certificate holders. The rule also requires certain management officials for all certificate holders under parts 121 and 135. The rule is intended to increase safety in scheduled passenger-carrying operations and to clarify, update, and consolidate the certification and operations requirements for persons who transport passengers or property by air for compensation or hire.

NOTE: Please refer to preamble pages P-619 through P-734 for entire preamble.

to Lat. 36°21'30" N., Long. 112°00'00" W.; to Lat. 36°35'30" N., Long. 111°53'10" W.; to Lat. 36°53'00" N., Long. 111°36'45" N., Long. 112°00'00" W.; to Lat. 36°35'30" N., Long. 111°53'10" W.; to Lat. 36°53'00" N., Long. 111°36'45" W.; to Lat. 36°17'00" N., Long. 111°42'00" W.; to Lat. 35°59'30" N., Long. 111°42'00" W.; to Lat. 35°57'30" N., Long. 112°03'55" W.; thence counterclockwise via the 5 statute mile radius of the Grand Canyon Airport airport reference point (Lat. 35°57'09" N., Long. 112°08'47" W.) to Lat. 35°57'30" N., Long. 112°14'00" W.; to Lat. 35°57'30" N., Long. 113°11'00" W.; to Lat. 35°42'30" N., Long. 113°11'00" W.; to 35°38'30" N.; Long. 113°27'30" W.; thence counterclockwise via the 5 statute mile radius of the Peach Springs VORTAC to Lat. 35°41'20" N., Long. 113°36'00" W.; to Lat. 35°55'25" N., Long. 113°49'10" W.; to Lat. 35°57'45" N., 113°45'20" W.; thence northwest along the park boundary to Lat. 36°02'20" N., Long. 113°50'15" W.; to 36°00'10" N., Long. 113°53'45" W.; thence to the point of beginning.

Section 2. Definitions. For the purposes of this special regulation:

"Flight Standards District Office" means the FAA Flight Standards District Office with jurisdiction for the geographical area containing the Grand Canyon.

"Park" means the Grand Canyon National Park.

"Special Flight Rules Area" means the Grand Canyon National Park Special Flight Rules Area.

Section 3. Aircraft operations: general. Except in an emergency, no person may operate an aircraft in the Special Flight Rules Area under VFR on or after September 22, 1988, or under IFR on or after April 6, 1989, unless the operation—

(a) Is conducted in accordance with the following procedures:

NOTE: The following procedures do not relieve the pilot from see-and-avoid responsibility or compliance with FAR 91.119.

(1) Unless necessary to maintain a safe distance from other aircraft or terrain—

(i) remain clear of the areas described in Section 4; and

(ii) remain at or above the following altitudes in each sector of the canyon:

Eastern section from Lees Ferry to North Canyon and North Canyon to Boundary Ridge: as prescribed in Section 5.

Boundary Ridge to Supai Point (Yumtheska Point): 10,000 feet MSL.

Supai Point to Diamond Creek: 9,000 feet MSL.

Western section from Diamond Creek to the Grand Wash Cliffs: 8,000 feet MSL.

(2) Proceed through the four flight corridors described in Section 4 at the following altitudes unless otherwise authorized in writing by the Flight Standards District Office:

| Northbound | Southbound |
|-----------------|------------------|
| 11,500 or | 10,500 or |
| 13,500 feet MSL | 12,500 feet MSL. |

(b) Is authorized in writing by the Flight Standard District Office and is conducted in compliance with the conditions contained in that authorization. Normally authorization will be granted for operation in the area described in Section 4 or below the altitudes listed in Section 5 only for operations of aircraft necessary for law enforcement, firefighting, emergency medical treatment/evacuation of persons in the vicinity of the Park; for support of Park maintenance or activities; or for aerial access to and

(d) Is a search and rescue mission directed by the U.S. Air Force Rescue Coordination Center.

(e) Is conducted within 3 nautical miles of Whitmore Airstrip, Pearce Ferry Airstrip, North Rim Airstrip, Cliff Dwellers Airstrip, or Marble Canyon Airstrip at an altitude less than 3,000 feet above airport elevation, for the purpose of landing at or taking off from that facility.

(f) Is conducted under an IFR clearance and the pilot is acting in accordance with ATC instructions. An IFR flight plan may not be filed on a route or at an altitude that would require operation in an area described in Section 4.

Section 4. Flight-Free zones. Except in an emergency or if otherwise necessary for safety of flight, or unless otherwise authorized by the Flight Standards District Office for a purpose listed in Section 3(5), no person may operate an aircraft in the Special Flight Rules Area within the following areas:

(a) *Desert View Flight-Free Zone.* Within an area bounded by a line beginning at Lat. 35°59'30" N., Long. 111°46'20" W.; to 35°59'30" N., Long. 111°52'45" W.; to Lat. 36°04'50" N., Long. 111°52'00" W.; to Lat. 36°06'00" N., Long. 111°46'20" W.; to the point of origin; but not including the airspace at and above 10,500 feet MSL within 1 mile of the western boundary of the zone. The area between the Desert View and Bright Angel Flight-Free Zones is designated the "Zuni Point Corridor."

(b) *Bright Angel Flight-Free Zone.* Within an area bounded by a line beginning at Lat. 35°59'30" N., Long. 111°55'30" W.; to Lat. 35°59'30" N., Long. 112°04'00" W.; thence counterclockwise via the 5-statute mile radius of the Grand Canyon Airport point (Lat. 35°57'09" N., Long. 112°08'47" W.) to Lat. 36°01'39" N., Long. 112°11'00" W.; to Lat. 36°06'15" N., Long. 112°12'50" W.; to Lat. 36°14'40" N., Long. 112°08'50" W.; to Lat. 36°14'40" N., Long. 111°57'30" W.; to Lat. 36°12'30" N., Long. 111°53'50" W.; to the point of origin; but not including the airspace at and above 10,500 feet MSL within 1 mile of the eastern boundary between the southern boundary and Lat. 36°04'50" N. or the airspace at and above 10,500 feet MSL within 2 miles of the northwest boundary. The area bounded by the Bright Angel and Shinumo Flight-Free Zones is designated the "Dragon Corridor."

(c) *Shinumo Flight-Free Zone.* Within an area bounded by a line beginning at Lat. 36°04'00" N., Long. 112°16'40" W.; northwest along the park boundary to a point at Lat. 36°11'45" N., Long. 112°32'15" W.; to Lat. 36°21'15" N., Long. 112°20'20" W.; east along the park boundary to Lat. 36°21'15" N., Long. 112°13'55" W.; to Lat. 36°14'40" N., Long. 112°11'25" W.; to the point of origin. The area between the Thunder River/Toroweap and Shinumo Flight Free Zones is designated the "Fossil Canyon Corridor."

(d) *Toroweap/Thunder River Flight-Free Zone.* Within an area bounded by line beginning at Lat. 36°22'45" N., Long. 112°20'35" W.; thence northeast along the boundary of the Grand Canyon National Park to Lat. 36°15'00" N., Long. 113°03'15" W.; to Lat. 36°15'00" N., Long. 113°07'10" W.; to Lat. 36°10'30" N., Long. 113°07'10" W.; thence east along the Colorado River to the confluence of Havasu Canyon (Lat. 36°18'40" N., Long. 112°45'45" W.) including that area within a 1.5-nautical-mile radius of Toroweap Overlook (Lat. 36°12'45" N., Long. 113°03'30" W.); to the point of origin; but not including the following airspace designated as the "Tuckup Corridor": at or above 10,500 feet MSL within 2 nautical miles either side of a line extending between Lat. 36°22'55" N., Long. 112°48'50" W. and Lat. 36°17'10" N. Long. 112°48'50" W.; to the point of origin.

Section 5. Minimum flight altitudes. Except in an emergency or if otherwise necessary for safety of flight, or unless otherwise authorized by the Flight Standards District Office for a purpose listed in Section 3(b), no person may operate an aircraft in the Special Flight Rules Area at an altitude lower than the following:

(a) Eastern section from Lees Ferry to North Canyon: 5,000 feet MSL.

(5) Eastern section from North Canyon to Boundary Ridge: 6,000 feet MSL.

(c) Boundary Ridge to Supai (Yumtheska) Point: 7,500 feet MSL.

under SFAR 38-2 or part 119 of this chapter may operate an aircraft having a passenger-seat configuration of 30 seats or fewer, excluding each crewmember seat, and a payload capacity of 7,500 pounds or less, in the Special Flight Rules Area except as authorized by operations specifications issued under that part.】

Section 7. *Minimum terrain clearance.* Except in an emergency, when necessary for takeoff or landing, or unless authorized by the Flight Standards District Office for a purpose listed in Section 3(b), no person may operate an aircraft within 500 feet of any terrain or structure located between the north and south rims of the Grand Canyon.

Section 8. *Communications.* Except when in contact with the Grand Canyon National Park Airport Traffic Control Tower during arrival or departure or on a search and rescue mission directed by the U.S. Air Force Rescue Coordination Center, no person may operate an aircraft in the Special Flight Rules Area unless he monitors the appropriate frequency continuously while in that airspace.

Section 9. *Termination date.* This Special Federal Aviation Regulation expires on June 15, 1997.

Authority: 49 U.S.C. 1303, 1348, 1354(a), 1421, and 1422; 16 U.S.C. 228g; P.L. 100-91, August 18, 1987; 49 U.S.C. 106(g) (Revised Pub. L. 97-449, January 12, 1983).

SFAR 50-2:
SPECIAL FLIGHT RULES IN THE VICINITY OF
GRAND CANYON NATIONAL PARK

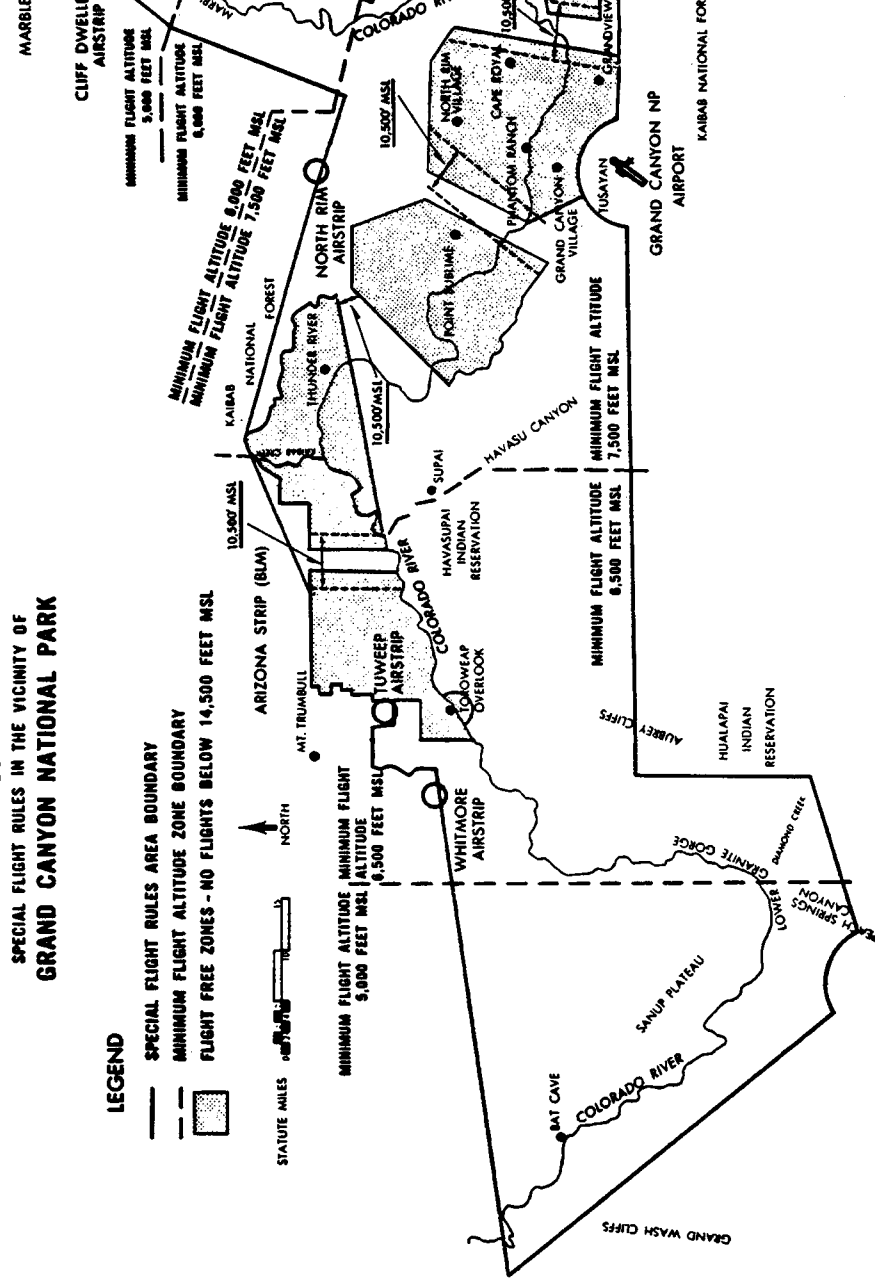
LEGEND

- SPECIAL FLIGHT RULES AREA BOUNDARY
- - - MINIMUM FLIGHT ALTITUDE ZONE BOUNDARY
- FLIGHT FREE ZONES - NO FLIGHTS BELOW 14,500 FEET MSL

STATUTE MILES



NORTH



passenger-carrying operations in airplanes that have passenger-seating configurations of 10 to 30 seats (excluding any crewmember seat) and those conducting scheduled passenger-carrying operations in turbojet airplanes regardless of seating configuration. The rule revises the requirements concerning operating certificates and operations specifications for all part 121, 125, and 135 certificate holders. The rule also requires certain management officials for all certificate holders under parts 121 and 135. The rule is intended to increase safety in scheduled passenger-carrying operations and to clarify, update, and consolidate the certification and operations requirements for persons who transport passengers or property by air for compensation or hire.

NOTE: Please refer to preamble pages P-619 through P-734 for entire preamble.

“Air tour” means any sightseeing flight conducted under visual flight rules in an airplane or helicopter for compensation or hire.

“Air tour operator” means any person who conducts an air tour.

Section 3. Helicopter flotation equipment. No person may conduct an air tour in Hawaii in a single-engine helicopter beyond the shore of any island, regardless of whether the helicopter is within gliding distance of the shore, unless:

- (a) The helicopter is amphibious or is equipped with floats adequate to accomplish a safe emergency ditching and approved flotation gear is easily accessible for each occupant; or
- (b) Each person on board the helicopter is wearing approved flotation gear.

Section 4. Helicopter performance plan. Each operator must complete a performance plan before each helicopter air tour flight. The performance plan must be based on the information in the Rotorcraft Flight Manual (RFM), considering the maximum density altitude for which the operation is planned for the flight to determine the following:

- (a) Maximum gross weight and center of gravity (CG) limitations for hovering in ground effect;
- (b) Maximum gross weight and CG limitations for hovering out of ground effect; and
- (c) Maximum combination of weight, altitude, and temperature for which height-velocity information in the RFM is valid.

The pilot in command (PIC) must comply with the performance plan.

Section 5. Helicopter operating limitations. Except for approach to and transition from a hover, the PIC shall operate the helicopter at a combination of height and forward speed (including hover) that would permit a safe landing in event of engine power loss, in accordance with the height-speed envelope for that helicopter under current weight and aircraft altitude.

Section 6. Minimum flight altitudes. Except when necessary for takeoff and landing, or operating in compliance with an air traffic control clearance, or as otherwise authorized by the Administrator, no person may conduct an air tour in Hawaii:

- (a) Below an altitude of 1,500 feet above the surface over all areas of the State of Hawaii, and
- (b) Closer than 1,500 feet to any person or property; or
- (c) Below any altitude prescribed by federal statute or regulation.

Section 7. Passenger briefing. Before takeoff, each PIC of an air tour flight in Hawaii with a flight segment beyond the ocean shore of any island shall ensure that each passenger has been briefed on the following, in addition to requirements set forth in [14 CFR 91.107, 121, 571, or 135.117:]

- (a) Water ditching procedures;
- (b) Use of required flotation equipment; and
- (c) Emergency egress from the aircraft in event of a water landing.

Section 8. Termination date. This Special Federal Aviation Regulation expires on October 26, 1997.

